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VIRGINIA MEDICAL MONTHLY

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THE MEDICAL SOCIETY OF VIRGINIA
WASHINGTON, D.C., OCT. 31-NOV. 3, 1954

JANUARY, 1954

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GUEST EDITORIAL

American Medical Education Foundation

This open letter is written to members of The Medical Society of Virginia in behalf of the American Medical Education Foundation.

FOR the benefit of those who have not learned about this fund, it may be well to give a brief outline of the reason for its formation.

During the past decade, the cost of medical education has risen very rapidly, due to many factors: (1) Salaries of teachers. To compete with private industry which needs many scientists such as teach in medical schools, the salary scale has risen markedly. Technical salaries have also risen for the same reason. (2) Cost of materials used in laboratories. (3) Marked increase in the number of teaching laboratories due to the rapidly expanding field of medical knowledge. (4) Tremendous increase in the cost of teaching beds in hospitals, and a similar increase in the operating of teaching clinics.

The budgets of medical schools have not been increased proportionately, and universities of which medical schools are only one part, cannot get increased appropriations in the case of State or Municipal medical schools, and the income from endowments in privately financed medical schools has not been able to keep pace with this increase.

Only two alternatives present themselves if medical schools are to continue to give a good quality of instruction. The first is federal subsidy of medical education. This is dangerous for several reasons. Due to economies in government, the allocations to institutions could be cut materially at any session of Congress which would wreck teaching programs. Another excellent reason for not going on "federal relief" is that under rulings of the Supreme Court of the United States, the Federal Government, if it so desires, can *control* the expenditure of any appropriation. None of us likes the latter implications!

The second alternative is the establishment of a fund such as the American Medical Education Foundation with annual subscriptions from physicians, supplemented by funds allocated by industry, friends of Medicine, and the like.

All of us received our medical education at a much greater cost than was paid by us in our tuition charges. In fact, we were provided what might be termed "working capital" to the extent of several thousand dollars. This "capital" has enabled us to make a good living, since the average income of a doctor is higher than of any other profession. Shouldn't we look upon this as a loan to be repaid over a period of years, now that we have a good earning capacity? Your alma mater, or the medical school

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of your choice, desperately needs money in order to continue to provide good medical education. Don't force this school to go to the Federal Government, hat in hand, asking for financial help.

The A.M.A. has underwritten all costs of operation of the Foundation so that every dollar contributed goes to the school of your choice, without any deduction whatsoever for operational or promotional expense.

Help repay this personal debt of yours by contributing generously *each year* to the school of your choice.

VINCENT W. ARCHER, M.D.,
President, The Medical Society of Virginia

Dr. Archer is Professor of Roentgenology and chairman of that department at the University of Virginia, School of Medicine.

P. R. Survey

A public relations questionnaire was recently sent to 210 Virginia physicians in five specially selected localities in order to sample the thinking of the membership with regard to the State PR program.

The replies were both interesting and enlightening. For example, 95% of those replying approved the monthly newsletter "Current Currents", while 70% read the monthly bulletins for office personnel, 86% approved the PR course for office personnel, but only 50% thought that a similar joint course for physicians and office personnel would be well received. 89% were in favor of using good TV films whenever possible.

All in all, it would appear that a majority of the members of the Society approve the efforts of the Public Relations Committee.

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CONFIDENCE, UNLIMITED*

H. SHERMAN OBERLY, PH.D.,
President, Roanoke College,
Salem, Virginia

INTRODUCTORY REMARKS BY DR. JOHN E. GARDNER

The Hippocratic oath is familiar to all of us who took it when we solemnly faced the duties of our profession. Hippocrates, the father of medicine, we are told, was a learned, orderly, observant and humane man with an earnest desire to record his knowledge for the use of his brother physicians. One sentence in that oath reads: "I will impart this knowledge by precept, by lecture, and by all other manner of teaching, not only to my own sons, but to the sons of him who taught me and to disciples bound by covenant and oath, according to the law of the physicians, but to none other."

It is particularly fitting then, it seems to me, that we should have as our featured speaker to-night, a man, who like the father of our profession, is also learned, scientifically trained and humane, and who, like Hippocrates too, has devoted his richly significant life, as a trained psychologist and administrator to helping others to the best of his power. Never using magic or charms, other than his own engaging personality, he goes always, as he has come to us tonight, as a friend and helper.

For a number of years, our speaker was Dean of Admissions at the University of Pennsylvania. If he chose, he could give us a highly interesting report on his experiences with the thousands of applicants for the medical school alone. Since coming to Salem in 1949 he has, as had his predecessor Dr. Charles J. Smith, won a warm place in the hearts of the faculty and student body of Roanoke College, and of the citizens of Salem and Roanoke, and the country at large.

Dr. H. Sherman Oberly did his undergraduate work at Muhlenberg College and holds a Ph. D. degree in psychology from the University of Pennsylvania. He also holds honorary degrees from his Alma Mater and Gettysburg College. It gives me no little satisfaction to present to you at this time, Dr. H. Sherman Oberly, President of my own Alma Mater, Roanoke College.

It is an honor to be invited to address the members of The Medical Society of Virginia, and a privilege for the president of a liberal arts college to be permitted to address some remarks regarding items of mutual interest. The selection of a topic was left in my hands when, some five months ago, I accepted the invitation. This, therefore, means that the period of "simmering" has been long, and what I present tonight represents the boiling point. Whether or not the "brew" is complete and "tasty" remains to be seen.

*Address presented by invitation before the annual meeting of The Medical Society of Virginia at Roanoke, October 18-21, 1953.

Yes, the selection of a topic is usually left to one—especially a college president. Some folk believe that he is erudite, and is capable of talking in any field. I warn you that I have always been most careful to avoid such pitfalls, and so, I must try to limit my subject to something which is at least familiar. Some ideas which have floated before my mind have been:

1. "A layman looks at the medical profession."
2. "Preparation for the practice of a medical science."
3. "What does the layman seek from the medical profession?"
4. "My physician and I."

Objections to these may be obvious, but I can give you a few reasons why I have discarded them. For example, I should not be so bold as to try to talk about what a layman thinks of the medical profession. I have never told the shop foreman in the garage what is wrong with my car, nor advised him what to do. I have never told my dentist how to work over my teeth, although I have been free in telling him where I think pain originates! Some years ago when our son was in the third grade, his teacher reported that he was having considerable trouble with his reading, and sent books, charts and instructions and a note to me, suggesting that, since I was a "psychologist," I could render some help. My reply, almost too immediate, was to the effect that I knew nothing about teaching reading and that she might as well have sent dental tools—and, of course, I was forever blackballed in that school as a non-cooperative parent. Within the last few months a repair man appeared at our home. During the half hour of his visit, I watched him, and for some reason, our casual conversation came around to medical treatment. I was fascinated, not only by his use of technical words used in the medical profession, but by his calm assurance that most laymen can diagnose and treat many diseases—and why? The simple truth seemed to be that most of the practitioners with whom he had dealt knew less than he. I was moved to write down a list of disorders, which could start with appendectomies, biopsies, cancer, dermatological diseases, erysipelas—and on through the alphabet including the heart, indiges-

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tion, jaundice and the Kinsey report. I am sure you have all met this layman, in one way or another, yourselves.

My second proposal had to do with the preparation for the practice of medicine, but this becomes technical and involves the choices of a college, a medical school, the hospital where one shall interne, and the locality where the practice shall be set up. In fact, too involved for me, with no experience in the field.

Again, my third proposal is difficult, because I cannot speak for all laymen in stating what they seek. And, of course, my fourth topic—"My Physician and I" is all too personal. However, you will observe that in this "simmering" process I have constantly come back to the idea of the layman and his relationship to those in the medical profession.

A series of circumstances brought forward in my mind the idea which I wish to discuss this evening—a thumbnail description is "Confidence, Unlimited."

Confidence is the belief in an idea; belief that something exists even though it may not be subject to investigation by our senses. We can believe in the ability of a man, and this is brought about by observing how he solves problems. If we observe the way in which native intelligence is used, we form judgments which are associated with the words "success" or "failure". Going through this, we find implied that associated with the word "confidence" is the word "truth". I do not come before you to "bandy" words, or to confuse you with too many intangibles. Rather, I must lay a foundation for developing this theme.

First, I choose to ask you some questions. What do the members of the medical profession seek in a candidate for the profession? Similar questions can as well be asked regarding the law, ministry, engineering, teaching and all other professions.

Are these some answers which you will give me:

1. A candidate must possess native intelligence and ability.
2. A candidate must have completed a preliminary course (in a college) which includes the basic sciences. He must also complete the courses specified in his medical school.
3. A candidate must be able to present recommendations regarding his character, which must be above reprcach.
4. There must be some "estimate" or "prediction" regarding his probable future success as a practicing member of a medical profession.
5. A candidate should enter the profession with motives which are a credit to the profession.

I have been interested in a book—"How to Become a Doctor,"† which was prepared as a guide. The following paragraph strikes me as being very important.

"When the young doctor graduates and goes forth to save humanity from the evil forces of disease, he is thrust into a position of importance and leadership in the community. He can better fill this place, and his success as a physician will be much greater, if he has a well rounded education, rather than being narrowly trained in the medical sciences. The successful physician must be a community leader and should be able to speak publicly upon occasion, to associate with other university trained people, to understand the personal and social problems of his clientele. He needs to be a sociologist, a philosopher, a psychologist, a father-confessor, an artist, a salesman, and many other things as well as an all-wise doctor."

Next, I should try to suggest what the layman seeks—it can probably be summarized in the four letter word—CURE. However, as a layman, I must not be surprised to learn that three possible phases of practice are (1) that of the general practitioner, (2) the specialist, and (3) the research worker. It is, I believe, the coordination among these three avenues which engenders confidence in the mind and heart of the layman.

A moment ago I referred to the "motive" of the candidate seeking admission to your profession. On one occasion, speaking before members of another profession, I raised the same question. To illustrate my point, I merely raised this question: "Should this boy be encouraged to enter the medical profession merely because his parents think that he would make a nice appearance wearing a white coat and carrying a stethoscope around his neck?"

This illustration seemed to impress a newspaper reporter who was present, for a headline indicated that I questioned the motive of all practicing physicians! In fact, I received critical letters and even suggestions that I demand that the reporter correct the headline. Of course, you can understand that I was simply trying to question the motive of the prospective candidate for any profession.

This question of motive has always been of primary interest to me. For a ten year period I served as a dean of admissions in a large university. My re-

†"How to Become a Doctor", by George R. Moon, A.B., M.A., Examiner and Recorder, University of Illinois Colleges of Medicine, Pharmacy and Dentistry: The Blakiston Company, Philadelphia, 1949.

sponsibility was the processing and selection of credentials in seven undergraduate schools. More than 60,000 full-time applications came through my office, from which slightly more than 18,000 students were registered. In reviewing these figures, I find that 4500 were accepted in Arts and Science, and of this number between 20% and 25% had signified their interest in a pre-medical program. I do not know how many were successful in completing the course and were accepted by schools of medicine, nor the number which eventually entered the profession. I do know, however, that I was always aware that we were looking for something more than mere grades.

By this time, my listeners will understand that my choice of a topic such as "Confidence, Unlimited!" is based upon experience, and has not been drawn from a hat. I am tempted at this point to follow the style of Edward R. Murrow's program—"This, I believe!"

I believe that the admissions committee in a college must take into account the record of the applicant—how has he demonstrated his ability in his own school. Furthermore, I must consider the applicant's reputation among his classmates and his community, and what the principal or headmaster may state regarding the character of the applicant. This is built up through *confidence* in the school, and a willingness to accept the word of an individual whom you trust and in whom you have *confidence* as to integrity. General aptitude tests are very important, for through these we can obtain a rating on a broader scale than that of any one school. In fact, aptitude tests serve a purpose similar to the many tests which the patient now undergoes upon entering a hospital for observation and treatment.

So, each fall, every college faculty looks at the new class with hope, and starts with a fervent determination to do the best job possible in the educational process. Those students who do not choose to work naturally fall by the wayside. In these days of trying to "get something for nothing", many young men and young women believe that mere physical presence in a classroom will bring about an atmosphere whereby the subject matter permeates his bloodstream. How can we fail to repeat, again and again, that *mental growth requires work!* Of this, I am confident.

The subject matter in a pre-professional program for medical sciences frequently prevents the student from participating fully in extra-curricular activities, and he may even find it difficult to take those courses in other fields which he will never in the future be able to take up. Therefore, I maintain that a broad general program in liberal arts is the best suited for one who all too soon will enter fields of specialization. There was much consternation on my own campus within the last few weeks when a professor outlined the requirements for medical schools. Some students left this meeting with the idea that they were required to take four years of chemistry. Our records from last year's graduating class show that five of the eight students majored in biology, and three in chemistry.

Why should not a student who majors in English, history, government, psychology or sociology be a good prospect for a medical school? Do you want good citizens, or merely good technicians? Where can the student hope to browse in fields other than in science unless he does it during his undergraduate student days? Further, why should not *four* years of preparation be required in principle, as well as in practice?

These principles of broad premedical training are put into practice in some schools. I wish to quote from a letter received from one Dean of a school of medicine:

"It is the feeling of the faculty of our school of medicine that a medical student should be as broadly educated as possible and we, therefore, feel that our required biological and physical science courses should be practically maximum in any pre-medical course unless, obviously, a student is planning to major in any one of the sciences pursuing a program leading to a B. S. degree before admission to the School of Medicine. It is strongly urged that a student take more of the suggested elective courses since it is not true that a student taking as many sciences as possible will necessarily have a better chance of being accepted than students who have selected a broader cultural program."

(Tulane University, September, 1948)

This school also requests ratings as to the candidate's appearance, speech, manners, consistency, promptness, and intensity of effort. This places a great deal of responsibility on the college and the staff members. As time goes on, confidence is built up between institutions, and one must be fair and just. Recently I was asked to submit a letter of recommendation on behalf of the college. Following is a direct quotation from a faculty member regarding the applicant:

"Personally, I do not feel that he is the type of individual that Roanoke College wants at any medical school or

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that the medical profession should have as a future member. If my memory serves me correctly, he was not popular with his fellow students and distinctly left a sour taste with me."

Having confidence in the writer of the letter, there was only one course of action. So, you see, confidence, comes early. As members of the profession, you are undoubtedly approached very often to talk with young men and young women about your profession. You have your own criteria for confidence in people. Begin now to line up good prospects!

In the same manner, the layman must have confidence in the members of the profession. The personal side is never under-estimated by you. Confidence is a belief in values. Last week I attended a luncheon at which there was an educator from Scotland. He is in this country on a Fulbright Scholarship, making a study of the selective processes used by American colleges. I asked specifically about the admission procedures used by the medical college in Edinburgh. He replied, with a sly smile, that the admission procedure was very simple. A Scot who was willing to lay out a one pound note must have decided that the medical profession was all right for him. And he is admitted. Again—a matter of value.

We in the colleges must have unlimited confidence in the integrity and the ability of those whom we recommend to the professional schools. We have the opportunity to observe these young men and young women as they grow and develop during the college years. We have a tremendous responsibility in our endeavors to train these young people for places of leadership, and, especially, as good and sound citizens. This can hardly be done if the educational process is one-sided. Philosophy, religion, and a study of man in general, will help to bring about a situation where these leaders of tomorrow are a credit to our homes, colleges and the nation.

In conclusion, I speak as one who through experience has learned what confidence means. I respect and value the work done in all professions and, in my small way, I hope that I may have a part in developing your co-workers of tomorrow.

All of us in positions of responsibility must merit the confidence of our fellow citizens.

Medical Education Meeting Set for February.

Discussions of interest to medical schools and licensing boards will be aired at the 50th annual Congress on Medical Education and Licensure February 7-8-9 at the Palmer House, Chicago. Conducted under the auspices of the AMA's Council on Medical Education and Hospitals and the Federation of State Medical Boards of the United States, the Congress program will be built around a golden anniversary theme. More than 500 medical educators, officers and members of state licensing boards and others interested in postgraduate medical education are expected to attend.

PRIMARY CANCER OF THE LUNG*

FRANK PHILIP COLEMAN, M.D.,
Richmond, Virginia

The phenomenal increase in the incidence of cancer of the lung must be viewed with alarm, and requires frequent evaluation of methods of diagnosis and treatment. Cancer of the lung now leads all other cancer of the viscera in frequency and accounts for approximately ten per cent of cancer deaths in the male. Deaths from this cause ranked second only to cancer of the intestinal tract in 1948, and in 1946 and 1947 it ranked ninth and fourth respectively. This suggests a real increase in the incidence of lung cancer, whereas Steiner's[3] study of necropsy material indicates that the increase is relative. Whether this increase is apparent or real is of little practical value, for the prevalence of lung cancer demands the concerted efforts of all physicians if its control is to become more effective.

The etiology of cancer of the lung remains as obscure as that of cancer elsewhere in the body. It has been suggested that excessive smoking carried out over a long period of time, twenty years or more, may be a causative factor in its production. So far, our laboratory has been unable to produce cancer of the respiratory tract in animals by the inhalation of cigarette smoke over a period of years.[2] The questionable carcinogenic agent released by smoking cigarettes has not been identified and must await experimental proof before it can be accepted as a cause of lung cancer.

Victims of lung cancer may be divided into three clinical groups. The majority of the patients, approximately 90 per cent, will exhibit pulmonary symptoms as the initial complaint of the disease. Less than 4 per cent are discovered in the asymptomatic stage by routine chest x-ray or by mass survey studies. Ten per cent of lung cancer produces symptoms which are not referable to the chest. This latter group will usually have hopelessly advanced lung cancer by the time the extra-pulmonary symptoms are properly interpreted. Arthralgia and painful extremities associated with roentgenographic evidence of elevation and thickening of the periosteum of the shafts of the long bones should suggest the possibility of cancer of the lung, even in the absence of pulmonary symptoms. Interestingly enough, the pain and tenderness in the joints disappear with resection of the lung cancer, but usually the disease has spread beyond the confines of the lung and the symptoms recur in these patients. Symptoms of brain tumor, Horner's syndrome, or symptoms of generalized metastatic tumor may all occur in lung cancer without pulmonary symptoms. It is difficult to diagnose lung cancer in this group of patients at a time when surgical excision of the lung will meet with any measure of success.

Primary cancer of the lung may exist for months and occasionally for years before it produces pulmonary symptoms (Fig. 1). The lung is nearly transparent to the x-ray and even a small solid tumor stands out in sharp contrast to the radiolucent lung. This has enabled the roentgenologist to effectively detect cancer in its early stage as well as in the later symptomatic stages. The silent lung cancer may appear as a round shadow in the periphery of the lung, or, when situated more centrally, the appearance may be that of segmental atelectasis characterized by an area of increased density. The primary problem of identifying cancer in its early stages is confined to frequent and more widespread adult chest x-rays. The mass surveys for case finding by the Tuberculosis Association have uncovered many non-tuberculous abnormalities of the lung which all too often prove to be lung cancer. Abnormal shadows uncovered by these surveys which suggest lung cancer should be promptly brought to the attention of the family physician for immediate diagnosis and treatment. The asymptomatic lung cancer is the most favorable for treatment. We have found all of them resectable and, in 7 of the 8 cases herein reported, the new growth was confined entirely to the lung. This stands out in marked contrast to the 213 cases of symptomatic cancer of the lung where only 30 per cent were resectable and 88 per cent showed extension to either the mediastinal lymph nodes or beyond the lung.

Physicians as a rule are well acquainted with the pulmonary complaints of symptomatic lung cancer, but the presence of symptoms all too frequently in-

*Read before the Joint Session of the Virginia General Practitioners Association and the Virginia Chapter of the American College of Chest Physicians, Richmond, Virginia, May 6, 1953.

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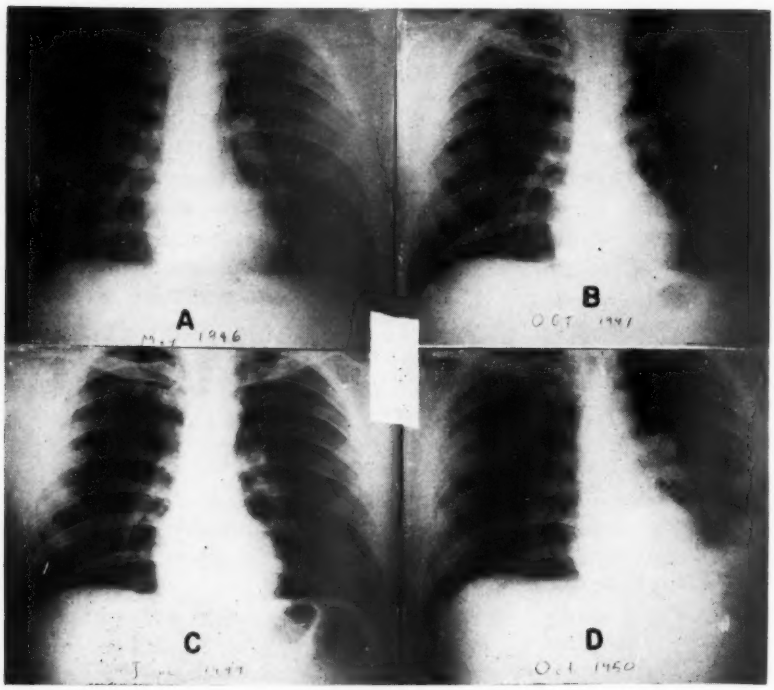

Fig. 1. A. Asymptomatic peripheral circumscribed carcinoma of the lung. B. & C. No change in peripheral lesion one and two years later. D. Explosive behavior of peripheral carcinoma three years later, showing increase in local growth and massive metastases to the mediastinum. This illustrates the danger of adopting an attitude of "wait and see if it grows" in solitary peripheral lung lesions.

dicates a far advanced lesion. Improvement in the results of treatment of symptomatic lung cancer can be accomplished only by making an earlier diagnosis. In 1946, the first 88 patients of the 233 cases herein reported had pulmonary symptoms for an average period of six months before establishment of the pathologic diagnosis of lung cancer, whereas the average duration of symptoms for the remaining patients was four months[1]. This is indicative of a favorable trend and further improvement can be expected in the future. Delay in diagnosis cannot be attributed entirely to the patient's negligence in seeking relief, for in many instances the physician failed to consider the presence of cancer and treatment was erronously directed to pleurisy, influenza, tuberculosis, virus pneumonia and intercostal neuralgia. In 5 cases metastasis to the brain so overshadowed other symptoms that a craniotomy was performed for a primary brain tumor. It is essential to be aware of the early symptoms of lung cancer and to maintain a high degree of suspicion of malignancy in those patients who present atypical pulmonary complaints or abnormal findings in the chest film. Symptomatic lung cancer frequently masquerades as suppurative and non-suppurative infections of the lungs and bronchi, atelectasis, lung cysts, emphysema, and benign tumors.

Cough, pain, hemoptysis, wheeze, shortness of breath and weight loss were the six most common complaints of lung cancer (Table 1). Eighty-four per cent exhibited cough or a change in the cough habit as the initial symptom. The cough associated with lung cancer has no peculiar characteristics, but

TABLE 1
SYMPTOMATOLOGY IN 233 CASES

	Cases	Per Cent
Cough	196	84.1
Pain	139	59.7
Hemoptysis	102	43.8
Dyspnea	87	37.3
Weight Loss	64	27.5
Wheeze	52	22.3
Tenderness (Palpation)	25	10.7
Symptoms Unrelated To Chest	12	5.1
No Symptoms	8	3.4

the development of a smoker's cough in a middle-age individual who has previously smoked without a cough should be regarded with suspicion. Of equal importance is a change in the cough habit. The initial cough is likely to be dry and expulsive efforts are ineffective. Eventually the cough becomes paroxysmal in character and frequently is associated with a purulent sputum, indicating associated pulmonary infection.

Pain or chest discomfort was present in 139 cases and varied in intensity from a heavy feeling in the chest to that of severe and intractable pain associated with osseous or brachial plexus extension of the cancer. The pain may be fleeting in character but it shows a tendency to persist and recur. It may lead to a diagnosis of pleurisy, and such is a likely explanation for the pain; however, the possibility of cancer cannot be dismissed in patients over forty years of age with this symptom by a cursory examination.

Hemoptysis indicates ulceration of the tumor or bronchial mucosa and it cannot be considered an early symptom. It was present in 102 cases (43.8%), and rightfully disturbed the patient more than any other symptom. Massive pulmonary hemorrhage is extremely rare until late in the disease and the usual finding is a blood-streaked sputum. This symptom alone is indicative of cancer of the lung until proved otherwise.

A wheeze is frequently considered asthmatic in origin by both the patient and physician, but here again certain characteristics should arouse suspicion of lung cancer. Development of asthma late in life is not as common as cancer of the lung. The wheeze may be generalized or localized on either side of the chest, or it may be referred to a substernal location. The existence of a unilateral wheeze over the chest in a middle-age individual is strong presumptive evidence of lung cancer.

Shortness of breath was present in 87 cases (37.3%). It seemed to parallel the extent of interference with lung volume. Pleural effusion, lobar atelectasis, associated infection, and paralysis of the diaphragm are factors leading to dyspnea. Some patients complain of tightness in the chest or inability to take a deep breath. Although weight loss is not suggestive of any particular disease, it was noted in 64 cases (27.5%). Tenderness to palpation over the thoracic cage was present in 25 cases and 12 of these showed invasion of the ribs by cancer.

Cancer of the lung is frequently confused with tuberculosis and non-tuberculous chest diseases. Too often upper lobe lesions are considered tuberculosis, while lower lobe disease is considered bronchitis, bronchiectasis, virus pneumonia or lung abscess. Seventeen per cent of the patients in this series had lung abscess, and this finding in patients over forty years of age strongly suggests the presence of lung cancer. Any pulmonary infection which does not clear completely or show progressive improvement over a period of three to four weeks should arouse suspicion of cancer of the lung. Pneumonitis associated with lung cancer may respond to antibiotics, but incomplete resolution may well indicate malignancy of the lung. Treatment erronously directed to unresolved or virus pneumonia may account for months of delay in the proper treatment of lung cancer. Bloody pleural effusion, metastasis to the supraclavicular lymph nodes, liver metastasis, cerebral metastasis, and involvement of the recurrent laryngeal nerve, sympathetic trunk, phrenic nerve or brachial plexus indicate lung cancer which has become hopelessly advanced.

The history, physical examination and roentgenography can only lead to a presumptive diagnosis of cancer of the lung, and other available methods for histologic confirmation of the clinical impression include sputum examination for tumor cells, bronchoscopy, and exploratory thoracotomy. Examination of pleural fluid for tumor cells, aspiration biopsy, biopsy of suspected lymph node extension, and biopsy of the chest wall or wall of a peripherally located lung abscess are methods primarily used for histologic confirmation of hopelessly advanced cancer (Table 2). The value of roentgenography can-

TABLE 2
METHODS OF DIAGNOSIS 233 CASES
CARCINOMA OF THE LUNG

	Cases
Bronchoscopy	106
Thoracotomy-Exploratory	55
Biopsy Lymph Node	18
Biopsy Chest Wall	6
Cytologic Examination of Sputum	6
Craniotomy-Unsuspected Brain Metastasis	5
Punch or Aspiration Biopsy	5
Tumor Cells Pleural Effusion	5
Biopsy Wall Peripheral Lung Abscess	3
Thoracoscopy (Biopsy)	1
Autopsy	23

not be over-estimated as a diagnostic method, either

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in symptomatic or asymptomatic lung cancer. In the group of 233 cases herein reported, an x-ray diagnosis of primary lung cancer was made or strongly suspected in 90 per cent of the patients. The radiologic features of cancer of the lung may simulate any pulmonary disease. Usually there is a shadow of a peripheral or centrally located tumor mass. Lobar atelectasis, pleural effusion, broadening of the mediastinum by invasion or metastasis, bony thorax extension of the tumor, diffuse lobar pneumonitis, localized areas of pulmonary emphysema, lung abscess, interlobar or diffuse empyema and an elevated diaphragm are all frequently seen in cancer of the lung. If the lesion on the roentgenogram is suggestive of cancer of the lung, the patient should be subjected immediately to further diagnostic methods.

Bronchoscopy has long remained one of the most outstanding methods for confirmation of the clinical diagnosis of cancer of the lung (Table 3). Its value

TABLE 3
BRONCHOSCOPIC EXAMINATION
IN 213 CASES

	Cases	Per Cent
Positive	106	49.7
Negative	92	
Not Examined	35	

is limited to lesions arising in the major bronchi and it is of little value in the early asymptomatic cancer. In 8 silent cancers of the lung discovered by routine, x-ray of the chest or in surveys the bronchoscopic examination was entirely negative, whereas this examination was positive in 49.7 per cent of the 213 cases of symptomatic cancer of the lung. In addition to its diagnostic value, bronchoscopy plays an important role in determining operability by defining the extent of the local growth and by depicting the likelihood of subcarinal or paratracheal lymph node metastasis.

Confirmation of the clinical diagnosis of lung cancer by a study of the sputum or bronchial washings can be accepted only if the tumor cells have been identified by an expert. A positive cytologic diagnosis, when reported by a pathologist skilled in cytology, is as reliable as a positive biopsy and is diagnostic in from 50 to 60 per cent of those patients with symptoms. Its value in the early asymptomatic stage of lung cancer is questionable. In approximately 25 per cent of the patients with lung cancer it is impossible by means of our present facilities to make a pre-operative morphologic diagnosis and recourse must be made to exploratory thoracotomy.

Fifty-five patients in this series with presumptive evidence of lung cancer and without pre-operative positive tissue diagnosis were subjected to exploratory thoracotomy for diagnosis and treatment. In early lung cancer the diagnosis, as a rule, can be established only by this method. It is impossible to differentiate a peripheral circumscribed tumor of cancerous origin from the various benign tumors or inflammatory masses which may simulate it (Fig. 2). The time factor is of so much importance in these patients that delay in recognition of the nature of the tumor may lead to disaster and exploratory thoracotomy should be resorted to early. One cannot wait for roentgenographic evidence of a change in the tumor or metastasis to the mediastinum before making a decision to explore the chest. The danger of exploration is negligible and comparable to a laparotomy for an ill-defined tumor of the abdomen. Unidentified tumors of the lung should be treated similarly to an unidentified breast tumor. Diagnosis of symptomatic cancer of the lung early and treatment of the uncovered asymptomatic lesion of the lung with dispatch will greatly improve our results and place cancer of the lung in the favorable position of cancer of the colon and rectum.

Roentgen therapy and radium have proved disappointing in both the curative and palliative treatment of primary cancer of the lung. More recently, mustard gas, either alone or in combination with x-ray therapy, and radioactive substances have been used; however, the results to date are not encouraging. The only hope of cure at the present time depends upon surgical extirpation of the lung, the regional lymph nodes and adjacent involved structures.

The advanced stage of cancer of the lung in this series of 233 cases is reflected in the operability rate (Table 4). The obvious extension of cancer beyond

TABLE 4
DISPOSITION 233 CASES OF LUNG CARCINOMA

	Cases	Per Cent
Thoracotomy - Considered Operable	129	55.3
Resection Feasible	81	34.7
Lobectomy-Palliative	7	
Pneumonectomy	74	
Far Advanced - Inoperable	104	44.7

the lung contraindicated surgery in 104 cases (44.7%). In 129 cases preliminary studies indi-

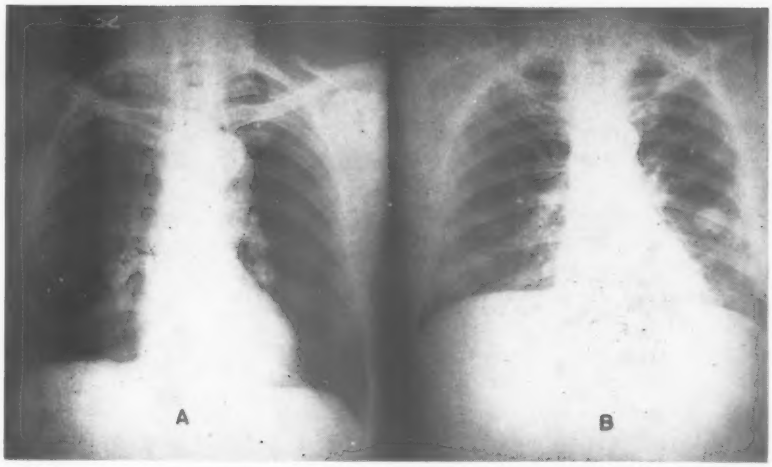

Fig. 2. A. 62 year old white male with a right hilar circumscribed tumor mass. B. 28 year old white male with a peripheral circumscribed tumor mass on the left. Diagnostic facilities failed to disclose nature of tumors. Which is malignant? Exploratory thoracotomy showed A to have a hamartoma, while B had an early peripheral small cell carcinoma of the lung.

cated that the lesion was confined to the thorax and probably operable. Evidence of extension of the cancer beyond the hope of cure accounted for prompt closure of the thorax without resecting a lobe or the lung in 48 cases. Pulmonary resection was possible in 81 cases, yielding an operability rate for the entire group of 34.7 per cent. Lobectomy was performed upon 7 occasions for palliation. Removal of the entire lung rather than a lobe, whenever possible, is in keeping with good cancer surgery. Of the 81 patients subjected to pulmonary resection, 13 died in the hospital (Table 5). It is not necessary to

TABLE 5
RESULTS OF RESECTION 81 CASES CARCINOMA OF LUNG

	Cases	Per Cent
Hospital Deaths	13	16.1
Deaths Later	37	45.6
Living and Well	31	38.3

make excuses for the mortality rate because this will range anywhere from 3 to 20 per cent depending upon the type of patient accepted for operation. Eight patients had previous attacks of coronary thrombosis which was confirmed at operation and 3 had a history of repeated attacks of angina pectoris. Seven patients had simultaneous block resection of the chest wall at the time of pneumonectomy, and 2 patients had pneumonectomy and block excision of the chest wall following previous drainage of lung abscesses to the exterior. A higher mortality can be expected in accepting this type of individual for surgery. The majority of deaths associated with cancer surgery of the lung are a result of cardiac complications. Infection is no longer a serious problem.

Since leaving the hospital, 37 patients have died. Thirty-one patients are living and well. Of these patients, 6 have been well for more than 5 years, 2 for more than 4 years, 8 for more than 3 years, 3 for more than 2 years, 8 for more than 1 year and 4 under 1 year (Table 6).

TABLE 6
SURVIVAL PERIOD OF 31 PATIENTS LIVING AND WELL FOLLOWING RESECTION FOR LUNG CANCER

	Cases
Under 1 Year	4
1 to 2 Years	8
2 to 3 Years	3
3 to 4 Years	8
4 to 5 Years	2
Over 5 Years	6

Progress in the treatment of lung cancer has reached its anatomical limits as far as surgery is concerned, and further progress in this field depends upon earlier diagnosis and treatment by surgical exploration of the chest of those patients who show suspicious roentgenographic evidence of cancer.

CONCLUSIONS

1. The more effective control of lung cancer demands that all physicians in active practice

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be familiar with its symptoms and maintain a high degree of suspicion of its possible presence in those patients who present atypical pulmonary complaints.

2. There are no characteristic symptoms of lung cancer but careful evaluation of pulmonary complaints singly or in combination and referral of such patients for chest roentgenograms will lead to an accurate presumptive diagnosis in approximately 90 per cent of the patients. Asymptomatic lung cancer generally indicates an early growth and can easily be recognized by roentgenograms of the chest.
3. Positive tissue diagnosis of lung cancer can be established by bronchoscopy, examination of the sputum for tumor cells and by exploratory thoracotomy. In one out of four patients with lung cancer suitable for curative pulmonary resection it is impossible by means of our present facilities to make a pre-operative morphologic diagnosis, and recourse must be made to exploratory thoracotomy.
4. The late diagnosis of symptomatic lung cancer and the infrequent recognition of early lung cancer in its asymptomatic stage has limited surgery in its successful application to carcinoma of this organ.
5. Further progress in the treatment of lung cancer depends upon early diagnosis and surgical exploration of the chest of those patients who show suspicious roentgenographic evidence of cancer.

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810 West Franklin Street.

Health of Workers Subject of AMA Congress.

Ways of keeping well workers well and on-the-job are among the topics to be considered by representatives of labor, management and medicine at the 14th annual Congress on Industrial Health. Sponsored by the AMA's Council on Industrial Health, the Kentucky State Medical Association and a number of additional national and regional groups interested in health and safety for the smaller industrial plant, the meeting will be held February 24-25 at the Brown Hotel, Louisville, Ky.

In addition to the above subjects, the program also will be devoted to consideration of the control of emergencies in industrial plants and the community as well as other technical problems of current interest in the industrial health field. Two special features will be a workshop on emphysema with reference to coal miners and a conference on union and management sponsored health centers.

A pre-conference planning session will be held Feb. 23 for chairmen of state medical society industrial health committees and Council members to review progress during the past years and to determine future action.

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ALEXANDER HUMPHREYS, M.D.—1757-1802*

RICHARD P. BELL, M.D.,
Staunton, Virginia

Today is an important one in the medical history of this city and county. The dedication this afternoon of the new King's Daughters' Hospital will, we believe, usher in for us a new era in medical practice; and on this day, when we are looking forward with so much hope and so much confidence, our Medical Society chooses also to look backward over a long period of time to the years between 1757 and 1802. This was the short life span of the man in whose honor we are here gathered. Who was this Dr. Alexander Humphreys and what did he do to warrant this long restrospect?

Alexander Humphreys was born in County Armagh, Ulster Province, in the north of Ireland, in 1757, being one of a family of ten children. His people were prosperous, well-educated members of the so-called Scotch-Irish race. That term, I claim, is a misnomer. These people were pure Scotch, transplanted to the north of Ireland by the forces of economic, political and religious adversity; and though living in Ireland, pure Scotch they remained. They neither intermarried nor intermingled with the native Irish; and now, after four hundred years, those who remain in Ireland of that Scotch-Irish race are still pure Scotch.

Of Alexander Humphreys' boyhood, we know little except that he received the best schooling available. His people were highly religious and of strictest Covenanter type. His mother's brother, Dr. Carlisle, was a well-known medical practitioner nearby; and young Alexander, having decided in his early youth on medicine as a profession, in due time became the pupil of his uncle. Those were the days of Preceptorships, when medical students read medicine and secured practical instruction in the homes and offices of successful practitioners. This tutelage continued from two to four years; and after this time some students entered directly into private, independent practice. Others transferred to medical schools, which were few in number, and there finished their education under eminent professors, many of them receiving finally the M.D. degree, but a considerable number entering practice with no degree. Alexander Humphreys, after absorbing all the medical lore Dr. Carlisle could impart, betook himself across the narrow waters and enrolled at the University of Edinburgh, then the most famous medical school in the world. After three years he graduated with the degree of Doctor of Medicine. By this time he had attained the age of twenty-five. The lure of America which was affecting so many of his countrymen began to draw him and he decided at about the termination of the Revolutionary War to emigrate to Virginia. The Scotch in Ireland were no lovers of England, and Humphreys doubtless heartily sympathized with the American Colonies and rejoiced in their triumph over the mother country. In fact, he had an older brother in Virginia who had lived in Augusta County near Greenville since 1764, and who had fought in the American Army. This brother, David Carlisle Humphreys, had become an influential citizen of the county; he had married a distant cousin, Miss Finley, and they had raised a large family of boys and girls who had intermarried with leading families in the county. Many descendants of David Carlisle Humphreys still live in this area.

And so young Alexander, with his new medical degree and much enthusiasm, emigrated to the New World, came directly to Augusta County and settled near his brother's home. He lived and practiced in the county between the years 1783 and 1787. The latter year found him in Staunton, lured hither by the greater opportunities offered by residence in the county seat and largest town west of the Blue Ridge.

And what sort of place did he find himself in when he moved here? A frontier town of about eight hundred people, one-fourth of them colored slaves; one church, the parish church of the county. The block surrounding this church had been presented in 1750 to the county by William Beverley. The cemetery was the community burying ground and was so used by all denominations and races until 1850 when it could hold no more graves. There were from fifteen to eighteen stores in the town, and seven inns. Staunton was at the crossing of two important highways and in those days of great migration to the

*Address delivered before the Augusta County Medical Association on the occasion of the dedication of a bronze tablet at the grave of Dr. Humphreys in Trinity Churchyard, Staunton, Virginia, April 15, 1951.

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west and south, many travellers stopped here. There was a courthouse, a primitive prison, a whipping post and a ducking stool, the latter never having been used because there was insufficient water in Lewis Creek to operate it. There were three doctors in the town besides Dr. Humphreys: William Groves, Hugh Richie and Alexander Long. Of them we know little. Richie was a Frenchman who had come over with the French troops who fought in the Revolution. There were no four-wheeled vehicles in Staunton, and only two gigs, or two-wheelers. Neither of these was owned by a doctor, so we conclude that these four were doctors on foot, sometimes on horseback. We have interesting but unflattering descriptions of the Staunton of that period written by two foreigners, an Englishman named Isaac Wald, and a Frenchman by the name of Rochefoucauld. From their accounts we learn that there were about two hundred houses in the town, mainly built of stone; that military titles and uniforms were very numerous; that gambling and betting were prevalent; that the food markets held twice weekly were exceedingly poor and that the horse races were miserable. Also, that the manners of the people were about like those of Richmond, whatever that may have implied. There was no post-office until 1793. The town was governed until 1802 by Trustees elected by the freeholders.

Into such a town moved Dr. Alexander Humphreys in 1787, four years after peace had been concluded with England. He was then thirty years of age. The following year he married Mary, the fourth child of the Reverend John Brown of New Providence Church, the first Presbyterian minister of Rockbridge County, and a man of outstanding character, education and intellect. Dr. Brown had a marked effect for good in his community. Beside his great work in his Church, he established and taught the first school in this part of the Valley of Virginia. Four sons and two daughters were born to Alexander and Mary Humphreys.

Searching for information about Dr. Alexander Humphreys, we find references to him in court records, deed books, various medical histories of his time, in government archives, in private letters and other sources. Pieced together, these records and references, all too few, seem to present the picture of a man whose short life had three distinct aspects:— his life as a citizen in a growing pioneer town; his life as a busy doctor; and his life as a teacher of medical students.

As a citizen of his new home, he soon came into prominence. We find him in 1790 helping to organize a Fire Company. Along with about forty of the leading business and professional men of the town, he became a member of that highly important organization. We next find him appointed by the court to a committee of five prominent citizens to report on plans for a new jail. We have records of his buying and selling numerous pieces of real estate in the town and in this and adjoining counties. We note his appointment, in 1791, as Gentleman Justice of the Peace. In 1792, with twelve other leading men, he was appointed by the Legislature as Trustee of the Staunton Academy, the first school established in the town. He was elected first president of its Board, and the following year we read of his serving on a committee of three Trustees to examine an applicant for the chair of Latin and Greek in the new school. During Dr. Humphreys' life-time this Academy was housed in rented rooms; but the year of his death saw the construction of a large brick schoolhouse on the northeast corner of New and Academy streets, which stood until about forty years ago. Dr. Humphreys served on a court of Gentlemen Justices, acting as a grand jury which indicted John Bullitt for horse-stealing, for which capital crime this unfortunate man was hung at the place of execution located by the court at the intersection of New and Augusta streets in the then northern limits of the town. From this fact, that part of Staunton was for many years known as Gallows Town.

As a practitioner of medicine, Dr. Humphreys appears to have soon become exceedingly busy and increasingly well-known throughout the town, the county and adjoining counties. His name appears in numerous court records attesting wills of prominent citizens, certifying the fitness of midwives to perform their duties, examining Revolutionary War pensioners. Some of these latter records show his intimate knowledge of anatomy. In 1793 he found it necessary to employ an apothecary to assist him with his work. Accordingly, he wrote to Edinburgh and secured the services of one George C. McIntosh, making a contract with him for a period of four years. McIntosh after one year defaulted on the agreement and entered practice independently, advertising his services to the public, claiming to have

graduated at Edinburgh and to have studied under the great Dr. Monroe. Humphreys sued him for breach of contract, but the suit was dismissed at the cost of the defendant. In 1788, soon after his arrival in Staunton, Humphreys petitioned the court for permission to erect an "elaboratory" on the prison lot. Permission was granted and he accordingly built a workshop at about the site of the present jail. Here he compounded drugs and carried on dissection for his own benefit and for that of his students. His own office and rooms for instructing students were also located in this building. His fame spread, he was sent for by doctors at a distance in consultation over difficult cases. One of these consultations of which we know was historic. Dr. Jesse Bennett, a graduate of the University of Pennsylvania, had settled in Rockingham County at the village of Edom. On January 14, 1794, his own wife was in labor with her first child. The labor was prolonged and unproductive, and Dr. Bennett, becoming alarmed, dispatched a messenger for Dr. Humphreys. On his arrival, the two endeavored in every way to bring about a successful delivery, attempting to apply forceps several times. The pelvis was found to be contracted and normal delivery impossible. Two procedures were then discussed: first, craniotomy, with destruction of the child; second, Cesarean section, an operation never performed on a living woman up to that time. Dr. Humphreys advised against the Cesarean operation and advocated craniotomy. Mrs. Bennett, the patient, then spoke up and begged for the Cesarean section, saying that she felt sure she would die under either procedure and wanting the life of the child saved. Dr. Bennett then requested Dr. Humphreys to operate, but he most positively declined to do so. Bennett then decided to attempt the job himself and accordingly, on a table of two planks resting on barrels, with two Negro women holding the patient and a huge dose of laudanum the only anesthetic, this heroic man proceeded to perform the first Cesarean section in history on a living woman, and, remarkable to relate, both mother and child survived and lived, both of them to old age. Dr. Bennett has not been accorded the place in history which he deserves, because he failed to report the case in medical literature. When asked by his colleagues why he failed so to report it, he replied that there were two reasons—First, no decent man would report such an operation on his own wife; and, second, his medical friends already knew of the operation and that doctors who didn't know him would never believe him if he reported it, and he was not going to give them the opportunity to call him a liar. This operation has since been duly authenticated and recorded by other doctors. It antedated Ephraim McDowell's ovariotomy by fifteen years. Incidentally, double ovariectomy was done by Dr. Bennett as part of the operation.

But it is as a teacher that the name of Alexander Humphreys has persisted for one hundred and fifty years in medical history; and it is mainly for his achievements as a teacher of medicine that we honor him here at his grave today. He attracted students from near and far. How many young men studied under him as preceptor, we do not know. Immediately after his death in 1802 his whole family moved to Kentucky and his records were either destroyed or taken along by the family. It is inconceivable that a man of his ability kept no records of any sort. Let us hope that there are records and that one of his six children preserved them and that they may some day come to light.

Out of the group of young doctors that Dr. Humphreys trained, there were five of whom we know who attained eminence of one sort or another. William Wardlaw, one of his first students, studied here more than two years, then emigrated to Tennessee and became famous in the early medical history of that new state. William Wardlaw and another student, James McPheeters, unwittingly brought trouble upon their preceptor. The remains of a human body which they had caused to be exhumed and had used for dissection, were sewed up by them in a crocus sack and deposited in a cave on Sear's Hill. The sack had the name of Dr. Humphreys on it; and after being found and inspected, a grand jury investigation was held. A traveller had disappeared from one of the town taverns and murder was suspected. The grand jury, on hearing the testimony of the students, acquitted Dr. Humphreys; but rumors spread to other towns and he had much worry and unhappiness and several law-suits in connection with the case.

Another student was Andrew Kean of Goochland County. He afterwards made a name for himself as a physician in his home county. He was chief surgeon of the Eighth Regiment of Virginia Militia

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in the War of 1812. He became more and more eminent as a doctor after this war and was offered a chair in the medical school of Thomas Jefferson's new University of Virginia. He declined the offer and continued in private practice.

William Henry Harrison, ninth President of the United States, in his youth started to study medicine under Dr. Andrew Leiper of Richmond. He then came to Staunton and continued his studies under Dr. Humphreys. Then he entered the University of Pennsylvania and was there when his father, Benjamin Harrison, of Charles City County, died. William Henry Harrison then gave up medicine and entered the Army, rising in rank to General. He defeated the Indians at the famous battle of Tippecanoe Creek and soon thereafter was elected President, defeating Martin Van Buren. He died one month after his inauguration and was succeeded by Tyler, his vice-president and a fellow Virginian.

Samuel Brown, younger brother of Dr. Humphreys' wife, was also a medical pupil of his brother-in-law. He studied in Staunton three years and then entered the University of Edinburgh, where he remained two years. He did not graduate, but returned to America in 1795. He tried out several locations, near Washington, in New Orleans, in Alabama, and, finally, he settled in Lexington, Kentucky. He was the pioneer vaccinator of America. Four years after Jenner's famous discovery, Samuel Brown had vaccinated successfully more than five hundred persons in Kentucky. Vaccination was still being only tentatively used at that time in the large cities of the East. Brown became professor of medicine in Transylvania University in Lexington, Kentucky, the first medical school west of the Alleghanies. He was also a scientist and contributed to scientific magazines. He wrote the first medical paper published by a Kentucky doctor. He also had the distinction of introducing lithography into America.

Last, and most famous of Dr. Humphreys' pupils, was Ephraim McDowell. Born in Rockbridge County just south of Fairfield, he moved to Kentucky with his family at the age of twelve. His father became one of the first judges in the new state. At the age of nineteen, Ephraim returned to Virginia and enrolled under Dr. Humphreys. After three years here, his teacher persuaded him to finish his education in Edinburgh. He remained there two years but did not graduate. He was mainly interested in surgery and was greatly moved and influenced by the famous Edinburgh surgeon and anatomist, John Bell. Returning to America in the late summer of 1794, he remained in Staunton until January, 1795, when he returned to his home in Danville, Kentucky. There he accomplished his amazing and revolutionary work in surgery, acquiring the title of Father of Ovariotomy and Founder of Abdominal Surgery. His work is too well known and reported to be further commented on here.

How are we to appraise and evaluate the worth of this man, Alexander Humphreys, one hundred and forty-nine years after his passing?

I submit that he was a doctor and a teacher far ahead of his times, and that he carried the torch of medical learning with honor to himself and benefit to humanity. It is pleasant to think that he may know of this gathering here today to do him honor; but whether he does or whether he doesn't, I would say to him:—"Dr. Humphreys, your successors in medicine after many years salute you; and it is our prayer that your great energy, your keen intellect and your abounding zeal to learn and to teach may so inspire us that we may become better and more useful practitioners of the art of healing."

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211 West Frederick Street.

THE TOTAL APPROACH TO THE DIAGNOSIS OF PULMONARY TUBERCULOSIS*

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There has been a definite tendency over the years to arrive at the diagnosis of pulmonary tuberculosis in many instances on too little evidence. This has often been true even in those cases where the findings at the time seem very convincing towards such a diagnosis. Considering the serious impact that a diagnosis of pulmonary tuberculosis may bring about socially, emotionally and economically, it is incumbent upon all practitioners to substantiate the presence of this disease beyond question whenever possible.

The various campaigns for the early diagnosis of pulmonary tuberculosis through x-ray surveys have brought about a gradual change in the type of case needing hospitalization. Ten or fifteen years ago, a patient would consult his physician because of symptoms such as loss of weight, fever, cough, night sweats, expectoration of blood and others. He then may have been referred to a tuberculosis sanatorium following an x-ray of his chest. At the present time the sequence of diagnostic procedures is likely to be reversed. An increasingly large proportion of patients are recommended for admission because of the findings on x-ray alone. These findings need not be solely confined to those resulting from mass x-ray studies but may occur in cases of individuals who are sent for x-ray of the chest for any reason such as might be recommended during a thorough clinical investigation. Quite a few of such cases are found to be non-tuberculous in character following varying degrees of investigation after hospitalization, for the expert roentgenologist and chest specialist will be the first to admit today that the diagnosis of tuberculosis from x-ray evidence alone is by no means infallible.

Garland[1] has enumerated 89 different conditions which in his experience and otherwise have been confused roentgenographically with pulmonary tuberculosis. This figure is rather astounding and it is assumed that every condition he has listed is not misdiagnosed *very frequently* as tuberculous. However, there are a certain group of entities that can be easily confused on x-ray with pulmonary tuberculosis. Some of the more common examples include virus pneumonitis, some cases of bronchopneumonia and lobar pneumonia, lung abscess, bronchiogenic cancer, fungus infections and occupational disease. Thus, the practitioner today finds a definite challenge in cases presenting positive findings following x-ray of the lungs. His first consideration should be the substantiation of his impressional diagnoses of pulmonary tuberculosis by employing the accepted clinical and laboratory methods at his disposal. The plea in this report is that we strive for a well rounded approach to the diagnosis of this disease and, in order to substantiate our diagnosis, then we attempt to produce all the accepted criteria possible in those cases where there is any question involved. An attempt will be made here to discuss the relative merits of the various diagnostic procedures for pulmonary tuberculosis and to reveal the pitfalls which can arise in their application.

Essentially four basic procedures or steps are necessary to establish the diagnosis of active pulmonary tuberculosis. They are:

STEP	METHOD
(1) Prove tuberculous infection.	Tuberculin test.
(2) Prove existence of a disease focus in the lung.	History, symptoms, physical examination, x-ray.
(3) Prove this focus to be tuberculous.	Demonstration of tubercle bacilli in the sputum or gastric contents.
(4) Prove that this focus is active.	Finding of tubercle bacilli; changes in serial roentgenograms; presence of symptoms referable to the pulmonary focus.

*Read before a Joint Meeting of the Virginia Academy of General Practice and the Virginia Chapter of the American College of Chest Physicians on May 6, 1953.

TO PROVE TUBERCULOUS INFECTION

Tuberculin Testing. The tuberculin test is usually the last procedure undertaken towards the diagnosis of tuberculosis in this day and time, if it is undertaken at all. It is indeed surprising how prevalent is the neglect to use this simple but reliable test in this modern era. Nearly all persons with either latent or active tuberculous infection react positively to tuberculin except when ill and toxic from advanced disease, often terminal, from miliary involvement, or when one of the infectious exanthemata is present. A positive reaction indicates the presence of a tuberculous focus in the body but, of course, does not distinguish between an active or an inactive lesion of a re-infection type in the lung. Except in the first few years of life, a positive tuberculin reaction is of very limited value in establishing a diagnosis of *clinical* tuberculosis. On the other hand, a negative intracutaneous reaction, particularly to a 1:100 and especially a 1:10 dilution of old tuberculin, practically excludes the existence of tuberculous infection at any age.

There is much difference of opinion as to the dilutions of old tuberculin to be used. At the Chest Clinic of the Richmond City Health Department it is the practice to begin with a 1:10,000 dilution of old tuberculin and then, if there is no reaction, to carry the tests through a 1:1000 dilution, and then a 1:100 dilution; in occasional cases a 1:10 dilution is found necessary. So far, in using this system, there have been no recognizable discrepancies between impressions gained by skin testing and the clinical picture. As a matter of interest, Woodruff[2] disclosed that in routine tuberculin testing of sanatorium admissions the proportion of positive sputum cases increased with lowered dilutions until a maximum of 66.7% was reached in the group positive to a 1:100 dilution of tuberculin.

When dealing with a suspected case of pulmonary tuberculosis the tuberculin test should always be done and, as mentioned above, may exclude the disease when negative. When the test is positive and when there is yet no corroborative evidence at hand, it is merely additional information on the positive side which will enter into the final analysis of the case.

TO PROVE THE EXISTENCE OF A DISEASE FOCUS IN THE LUNG

History. Of what value is a history in the diagnosis of pulmonary tuberculosis? Not unlike the case of many other diseases, there are certain facts which, when existent in the history, hasten the physician to entertain the diagnosis of pulmonary tuberculosis. As examples, previous confinement in a sanatorium, or a statement from the patient about a previous diagnosis are both extremely significant. Previous pleurisy with effusion, hemoptysis, and spontaneous pneumothorax all have varying significance. We know now, for example, that spontaneous pneumothorax, especially in young people, is most often *not* caused by pulmonary tuberculosis. Hemoptysis is no more a cardinal symptom of the disease since bronchiectasis and bronchial erosion are now believed to be more common causes. On the other hand, pleural effusion in the young is most often of a tuberculous etiology. Family history is believed of importance and so-called "contact" history is equally if not more important. All practitioners, however, should bear in mind that there may be none of these items entered in the history of a given case. We know, for example, that only about 30% of cases in the Richmond area give a definite contact history, and about the same percentage give a family history of this disease. The lack, however, of the above significant features of a history, and especially contact and family history, should have no influence at all when we are dealing with a suspected case of pulmonary tuberculosis.

Symptoms. In many cases of pulmonary tuberculosis, the frequent absence of symptoms, or at least of symptoms alarming enough to send the patient to the physician, is well known in this day. However, these patients are not *all* asymptomatic. Any deviation from optimal health existing for several weeks must arouse suspicion unless satisfactorily explained by other definite findings. Many cases of pulmonary tuberculosis would be diagnosed months or even years earlier if it were not so frequently assumed that fatigue, poor appetite, chronic anemia, vague gastro-intestinal disturbances, weight loss and a score of others occur commonly without organic disease. It should be realized that such symptoms can be manifestations of active tuberculosis. Such a diagnosis as chronic bronchitis, for example, often conceals the presence of tuberculosis, bronchiectasis, or bronchiogenic carcinoma. Remember, there are no classic symptoms of pulmonary tuberculosis in this day; rather, there is an infinite variety which may or may not be present.

Physical Examination of the Chest and X-ray.

The presence of abnormal physical signs is of unquestioned value in the diagnosis of lung disease, but the lack of such signs does not indicate the absence of disease. Advanced pathologic changes may be present in both lungs without demonstrable physical signs. Disease of the bronchial elements is apt to be productive of an abundance of auscultatory signs, while disease of the alveolar elements often exhibit a paucity of such signs. Fellows[3] compared the roentgen and physical signs of 280 patients with early tuberculosis. Abnormal physical signs were present in only 21%. Sampson and Brown[4] reported that in 392 cases with advanced pulmonary tuberculosis with cavity on x-ray, in only 15% were there physical signs suggestive of cavitation. In spite of the lack of correlation between roentgenographic and physical findings, we *must* utilize physical examination of the chest as one of our methods in the detection of the disease. In many instances the existence of a pathological focus in the lung can be proved this way. There is an apparent trend in the younger graduates, however, to almost completely disregard physical examination of the chest as being of any real value towards the diagnosis of lung lesions. This is definitely a wrong tendency. There will be many times wherein physical examination is all we may have at our disposal as a method of diagnosis, such as in the home in an isolated rural area, for example; then, the patient at home may not be in an ambulatory condition. Therefore, all the information we can possibly obtain at the bedside is necessary in order to proceed with an optimum plan in the handling of the case. However, the absence of a tuberculous focus in the lung can never be *proved* without an x-ray examination of the chest. It should be mentioned here that the use of the fluoroscope is not only completely inadequate for the detection of early disease, but can be a menace by instilling a false sense of security. Like physical examination, fluoroscopic examination should always be followed by roentgen examination. Today we accept the x-ray as the best single method of diagnosing early tuberculous lesions. We must remember, however, that this is true only provided we accept the shadows disclosed by such an examination as tuberculous in these questionable cases, or better, if we set about substantiating such shadows as being truly of tuberculous etiology. It is now obvious that x-ray of the chest has serious limitations and, as mentioned above, we now know that a great many persons who have been diagnosed tuberculous had other pathologic conditions that produced shadows indistinguishable from those cast by tuberculosis. It is believed permissible that the x-ray supersede other investigative procedures in locating the disease, but to attempt to carry the x-ray beyond this point in a great many instances, is to enter the field of speculation in diagnosis. At the same time, it must be realized there are a reasonable number of instances in this day whereby the pattern as presented on x-ray of the chest is so classic and so typical to the trained observer that one should be willing to accept the case as being tuberculous pending corroborative evidence bacteriologically and otherwise.

TO PROVE THAT THIS FOCUS IS TUBERCULOSIS

Demonstration of Tubercle Bacilli in the Sputum or Gastric Contents. The finding of tubercle bacilli in the sputum is specific for the diagnosis of pulmonary tuberculosis. It must be remembered, however, that the microscopical method of examination alone cannot distinguish between tubercle bacilli and other types of acid-fast bacilli. Besides saprophytic acid-fast bacilli of the microbacterium group, which are widespread in hay, straw, dust, animal litter, soil and water, there are a number of other organisms, such as the leprosy bacillus, Johne's bacillus and some species of antinomyces which are acid-fast and occasionally give rise to confusion.[5] In many cases, a single positive direct smear for acid-fast-bacilli should not be enough to label a questionable case pulmonary tuberculosis unless accompanied by characteristic x-ray pattern, a positive tuberculin test and the clinical picture of tuberculosis. Excepting in rare cases, no one should be hospitalized for pulmonary tuberculosis on the basis of sputum reports alone, as had often been done. In respect to sputum cultures, we must remember that many competent bacteriologists admit a possible error up to 5% in the interpretation of such cultures. It is not intended here to question the value of sputum examination in any respect whatsoever, but rather to call attention to the possible pitfalls which can arise in the utilization of the examination of the sputum and even gastric contents in selected cases.

In respect to examination of the gastric contents for tubercle bacilli, following gastric lavage, even though this procedure may not be practicable in all situations, it should be realized that the routine use of this technique will lead to an overall increase

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of "positives" by about 20% to 25%. There are certain instances when the examination of the gastric contents for tubercle bacilli should definitely be resorted to. For example, patients with scanty sputum will swallow it in many instances. This is a common occurrence in women and children. When the matter of early differential diagnosis is of utmost importance, we should examine the gastric contents for tubercle bacilli routinely in face of negative sputum examinations. Similarly, there are singular cases when guinea pig inoculation should be resorted to, such as when the clinical and roentgenological findings do not correlate with the sputum reports.

In an attempt to prove a lung lesion tuberculous, it is recommended occasionally that streptomycin be given a patient who has an undiagnosed lesion of the chest. If, under this plan, the lesion improves in two or three months, this suggests its tuberculous nature. From a scientific standpoint, one would have to look far for a more ridiculous procedure.

There are too many instances in which repeated sputum examinations were done even up to twenty to thirty in number, including cultures with negative results, and the observers were not too willing to accept that the case was non-tuberculous. It is to be remembered that sputum examination with negative results is frequently one of the most important criteria by which we may exclude the diagnosis of pulmonary tuberculosis and to assist us in arriving at a correct diagnosis.

TO PROVE THE LESION IS ACTIVE

Finding of Tubercle Bacilli; Changes in Serial X-rays; Presence of Symptoms Referable to the Pulmonary Focus. For all practical purposes the finding of tubercle bacilli in the sputum or gastric contents is *prima facie* evidence of activity of the tuberculous lesion under investigation. Many fail, however, to think in terms of degrees of activity as indicated by the sputum findings. In estimate, there should be present, for example, 100,000 bacilli per cu. mm. to obtain a positive direct smear, and from 10 to 100 bacilli per cu. mm. to obtain a positive culture. The very active, so called open, and especially the cavitary case, should be almost repeatedly positive upon direct smear. Almost at the other extreme, there is the arrested case that may give only an occasional positive culture.

In many cases, the attempt to determine the activity of established tuberculous lesions by a single x-ray examination is preposterous and the tremendous value of serial roentgenograms whereby the changing characteristics of lesions can be watched photographically is to be stressed. There can be a serious pitfall in this technique, however. One should never be satisfied with the comparison of merely two successive films in a series; rather, the initial examination film always should serve as the base line when one really wants to know what has happened to a lesion in a period of weeks, months or even years.

If one can be satisfied that the tuberculous patient's symptoms are referable to his disease focus, in many instances, pending other studies, this fact should arouse the suspicion that there is an active lesion. It isn't often, however, that definite symptoms ascribable to the lung lesion are present without some other clinching evidence for activity, such as positive sputum or roentgenographic changes.

SUMMARY

Tuberculin testing is not employed as widely at present as it should be towards the diagnosis of tuberculosis. Even though tuberculin positively admits of reinfection or primary tuberculosis, it is, of course, of no value in locating or determining the extent of the lesions, in differentiating primary from reinfection disease, or in detecting the presence of clinical disease. On the other hand, tuberculin makes it possible to distinguish between infected and non-infected individuals because only the former react to the test.

An adequate history of the patient, a higher index of suspicion on the part of the physician when the patient presents vague symptoms, and physical examination may aid the practitioner in substantiating a disease focus in the lung. However, the absence of tuberculous lesion can never be proved without an x-ray examination of the chest.

Microscopic examination of the sputum and sputum cultures should be done as a further aid towards diagnosis and activity of the lesions. Excepting rare instances, hospitalization should not be determined on the basis of sputum reports alone, however. On the other hand, in many cases, negative sputum examinations can help to exclude the diagnosis of pulmonary tuberculosis and can enable the arrival at a correct diagnosis.

Serial x-ray examinations are a valuable means

toward establishing activity of a lesion in question, but one should always remember to use the first x-ray in a serial as a base-line for the comparison of subsequent films.

Particular emphasis should be given to the importance of a well-rounded approach to the diagnosis of pulmonary tuberculosis in any case when there is doubt or question involved. One must bear in mind the possible social, emotional and economic impact such a diagnosis may entail. Hence, every means of diagnosis should be utilized in case of doubt.

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Health on the Radio.

Demand for AMA radio transcriptions on common health subjects hit an all-time high during 1953. During the year more than 700 sets were distributed for broadcasting over local radio stations in all parts of the country. Assisting the Bureau of Health Education in distributing these health education platters and promotional material are 14 distributing centers set up by 13 state medical societies and the Alaska Department of Health. The Pennsylvania Medical Society, for example, arranged 1,989 local programs in 1953 and the Louisiana State Medical Society 1,157.

One of the most popular series was "Heart of America," which presents 13 case reports from outstanding cardiologists. Other popular new series include: "Chats with the Champs," "Help Yourself to Health," "Yours for Health," and "June, July and August."

These transcriptions are provided without charge by the AMA as a public service for medical societies and woman's auxiliaries. Universities and high schools, state and local departments of health, various voluntary health agencies and allied health organizations, such as heart and cancer societies, often request these transcriptions and sponsor them locally. Such requests always are cleared through the local medical society.

Television Films

Are now available to state and county medical societies where arrangements can be made for showing them. Representatives of societies should call on TV station managers and interest them in the four programs now available which are of exceptional quality and informative. For information in regard to the programs, write TV Film Library, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

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CONGENITAL DIAPHRAGMATIC HERNIA— A Report of Repair 17½ Hours After Birth

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Congenital diaphragmatic hernia has been considered to be fairly rare but is now recognized more and more frequently. We believe it to be an important cause of newborn deaths.

Most surgeons who have written on the subject of congenital diaphragmatic hernia have emphasized early recognition and early repair. Ladd and Gross[1] and Donovan[2] maintain that these infants will endure surgical intervention exceptionally well, even shortly after birth. Baumgartner and Scott[3] say it is imperative that in the presence of post-delivery cyanosis and dyspnea the possibility of diaphragmatic hernia be checked by prompt X-ray study and early surgery instituted if a hernia is found. Harrington[4] says that if this type of hernia is found at birth it should be treated immediately by surgery.

Thus, in the newborn, operation should not be delayed in the hope of improving the child's condition before surgical intervention is undertaken. Such expectant treatment has been followed by an exceedingly high mortality rate[5]. Nevertheless, in the face of all these recommendations for early surgery, only one patient less than 22 hours of age who was operated on could be found in the English language literature, and he died[6]. In 1940, Hartzell[7] collected from the literature all of the cases operated on in children under 10 years of age. He found 68 cases, and the youngest operated on at that time was 41 hours old. The mortality rate in this group was 50% for those under one year of age. Tolins[8] reviewed the literature in 1952 and reported that 76 cases of congenital diaphragmatic hernias in infants under one year of age had been operated upon successfully. His personal case was 22 hours old. All articles written on this subject emphasize that a large majority of the hernias occur on the left side, and most of them are small apertures, usually in the posterior or posterolateral portion of the diaphragm.

Our patient was born at 8:30 P. M., February 25, 1952. The infant was dyspneic and cyanotic at birth. A chest X-ray was made soon afterward, which revealed that the left chest was filled with intestines (Figs. 1 & 2). The child had been in oxygen since birth, and this was continued for the 75-mile trip to this hospital. On arrival the child was cyanotic and dyspneic while receiving 100% oxygen. He was in an excellent state of nutrition and hydration, and it was felt that any delay would decrease his chances of survival. Consequently, surgery was begun within one-half hour after his admission to the hospital, which was 17 hours after birth.

We did not use an intratracheal tube but had one available if needed. A posterolateral incision was made between the 8th and 9th ribs on the left, and all mobile abdominal viscera were found to be in the chest. The stomach, small intestines, and transverse colon were found in a peritoneal sac, which reached to the apex of the pleural cavity. This sac was opened and the contents easily pushed down into the abdominal cavity. The intestines and stomach contained little or no air at this time. The remnant of diaphragm consisted of a membrane composed of pleura and peritoneum, which was folded against the heart. It contained a few barely discernible muscular fibers in its medial portion. It was unattached laterally, anteriorly, and posteriorly. When stretched out, it reached only about two-thirds of the way to the lateral chest wall. Parts of the 9th and 10th ribs were resected, and the chest wall muscle was pushed in so that this membrane could be sutured to it even though it was under some tension. The left lung easily expanded under positive pressure, and a small catheter was placed leading from the chest for suction. The child progressed slowly after operation.

The patient was discharged from the hospital about three weeks postoperatively. He was moderately dyspneic and the left diaphragm was high, but he was eating well and it was hoped that he would gradually improve. He was readmitted on two occasions because of pneumonia with dyspnea and cyanosis and had to be put into oxygen. He failed to gain weight, and eating made him breathless.

He was admitted the fourth time on May 14, 1952. He stayed in oxygen continuously and was cyanotic even there. He gradually became worse, and it was

obvious that he would not survive unless something more could be done. The X-ray (Fig. 3) showed that his left diaphragm had risen above the level of the clavicle, and it appeared that no opening had occurred in the diaphragm but, instead, it had simply stretched. We operated on him again through the same incision. The diaphragm was stretched all the way to the top of the chest cavity but was intact. The stomach and intestines could not be pushed down enough to imbricate the diaphragm satisfactorily, so a short upper midline abdominal incision was made and all mobile viscera displaced to the outside. Then the diaphragmatic membrane was folded over three times and sutured to itself and the chest wall. This made a thicker and tougher membrane and one which we hoped would not stretch so much again. Muscle fibers were still almost non-existent, and no movement in the diaphragm was ever discernible. The abdominal incision was closed without very much difficulty after the chest wall was closed.

Fig. 1.—P-A view of the chest twelve hours after birth showing the small intestine shadows high in the chest.

Fig. 2.—Lateral view of the chest twelve hours after birth showing the small intestine shadows high in the chest.

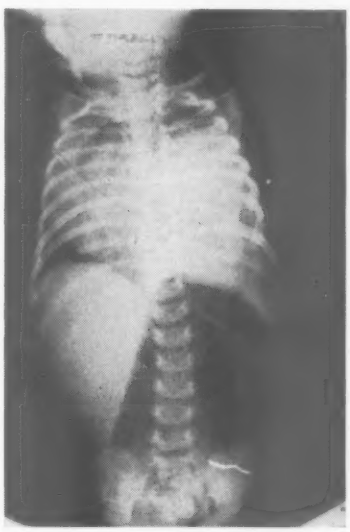

Fig. 3.—P-A view of the chest before the second operation. The left diaphragm has stretched to the height of the clavicle, and the mediastinum is almost completely to the right of the vertebra.

From the moment the left lung was expanded and the chest closed with a suction catheter in place, the infant was pink and breathing easily. He progressed rapidly, and within three days after operation he was eating well without dyspnea for the first time since birth. He left the hospital three weeks after operation. Since that time he has rapidly gained weight and vigor, and when last seen on the 5th of August 1953, he seemed like a normal child. The left diaphragm stays high at the fifth rib posteriorly but is stable. The heart has still remained partially on the right (Fig. 4).

Almost all articles on this subject emphasize the necessity of the abdominal approach[1,2,3,4,6,7, etc.], but I believe this situation could not have been dealt with adequately except through the chest. At the

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second operation, the intestines were distended with air so that it was necessary to pull them out of an abdominal incision, but both incisions were important.

The embryology and anatomy of the diaphragm have been thoroughly discussed by Harrington[4] and

Fig. 4.—P-A view of the chest six months after the second operation, showing the left diaphragm at the level of the 5th rib posteriorly. Both lungs are aerating well.

many others. The absence of the posterior portion of the left diaphragm with no posterior attachment has been reported fairly often[6, etc.], but we have found no reports where the child lived when the diaphragm was not attached posteriorly, laterally, or anteriorly.

The possibility of saving a considerable number of newborn lives by suspecting this condition in every cyanotic or dyspneic infant and undertaking immediate surgery if it is found should again be stressed.

SUMMARY

1. The case of a patient who had a congenital diaphragmatic hernia repaired at the age of 17½ hours and who is now well is presented.
2. This child is younger than any case found reported in the literature who has survived.
3. The extent of non-attachment and under-development of the diaphragm was exceedingly extensive.
4. A second operation was necessary because of extreme stretching of the diaphragm, which resembled a primary eventration.
5. It is emphasized that all newborns with persistent dyspnea and cyanosis should be X-rayed early. If a diaphragmatic hernia is found, the earlier the operation is performed the better. It should be feasible in many instances to operate before the infant is more than 5 or 10 hours old.

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NEAR FATAL ANAPHYLACTIC SHOCK ASSOCIATED WITH THE ADMINISTRATION OF PENICILLIN*

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Sensitivity reactions to penicillin are becoming more common. However, in spite of its very extensive use, only recently have there been reports of several fatal or near fatal reactions.[1-10] The following case report of near fatal anaphylactic shock associated with the administration of penicillin is presented to further warn against the promiscuous use of penicillin and other antibiotics. The case illustrates the importance of being prepared to treat such emergencies.

CASE REPORT

This 37 year old white female was referred by her physician to a urologist because of suprapubic pain, not associated with dysuria or pyuria. She gave a history of having been treated for urethral stricture and cystitis some three or four years previously. Cystoscopic examination was performed, which revealed a trigonitis. The urine showed 6-8 WBC per high power field. Because it was known that the patient had demonstrated other allergies, inquiry was made regarding previous penicillin sensitivity. She had received penicillin on numerous occasions, the most recent being about five months previously, and had never manifested any reaction. Three or four minutes following the administration of 300,000 units of aqueous procaine penicillin (Schenley), the patient complained of being flushed in the face and an instant later collapsed on the floor. She immediately had a tonic and clonic convulsion with urinary incontinence and became very cyanotic. Her respiratory efforts resulted in only slight gurgling in the upper bronchial tree and frothing at the mouth. No breath sounds were present, and the pulse, blood pressure and heart sounds were unobtainable. She was given 2 cc. of aqueous adrenalin intramuscularly and aminophylline 0.5 gr. diluted to 10 cc. was administered intravenously. Oxygen was administered with an Emerson Resuscitator. Thirty minutes after she collapsed, breath sounds were audible, though many rales were present. The heart sounds were audible, but of poor quality, and the radial pulse and blood pressure were yet unobtainable. She was given 40 units of adrenocorticotropic hormone in an aqueous solution intramuscularly and 40 units of the hormone in a gelatin suspension intramuscularly. Fifty minutes after the onset of the episode the lungs were free of rales and the heart sounds were improved. The blood pressure was still unobtainable and an infusion of 5% glucose in saline was started. At this time she was aware of her surroundings and complained of abdominal pain. Two hours after the administration of the penicillin her blood pressure was 80/50 and she was transferred to Memorial Hospital where her infusion was continued and she was placed in an oxygen tent for the subsequent three hours. For the remainder of her forty-two hours in the hospital she was asymptomatic except for the occurrence of transient edema of the right great toe and dorsum of the foot.

Past history revealed that for several years she had had symptoms of hay fever, and for the past four years has had desensitization injections during the spring. For three months prior to the penicillin reaction she had been getting weekly injections of a vaccine containing dust, wool and pollens. With her last injection, two weeks prior to the penicillin reaction, she had developed an urticarial reaction which had been treated with adrenalin and an antihistamine. She had shown a negative skin reaction to penicillium with intra-dermal tests done three years previously. During the past four years she had received a number of injections of penicillin for the treatment of colds, for an injury to her hand, and for a urinary tract infection. Two years previously she received tetanus antitoxin without reaction. On a few occasions, not related to injections, she has had slight wheezing in her chest but no frank asthma.

COMMENT

The successful management of anaphylactic shock demands immediate and vigorous treatment. In such severe reactions it is probably preferable to administer epinephrine intravenously in doses of 0.25 to 0.3 of 1:1000 solution and repeat as indicated. Aminophylline 0.5 should be administered intravenously. These measures aid in the relief of the

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acute pulmonary edema. Oxygen should be available for administration by mask. As the pulmonary edema subsides, shock is treated by the administration of intravenous fluids, or, if necessary, plasma. ACTH or cortisone may protect against recurrences of anaphylaxis or other delayed sensitivity reactions.

This case illustrates that the history of absence of reaction to previous injections of penicillin does not assure against serious reaction. Likewise, a negative skin test to Penicillium does not assure against anaphylaxis when subsequent injections of penicillin have to be given. With the extensive use of penicillin and its repeated administration, more serious reactions may be anticipated, and all persons who administer it should be prepared to treat such emergencies which may be occasioned by its use.

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New Books.

Below are listed some of the newer books received at the Tompkins-McCaw Library of the Medical College of Virginia, Richmond. Most of these may be borrowed under usual library rules.

Army Medical Service Graduate School—Symposium on stress. 1953.
Bailey—Intracranial tumors. 2d ed., 1948.
Bodian, ed.—Fibrocystic disease of the pancreas. 1952.
Clark—Preventive medicine in medical schools. 1953.
Clinical orthopaedics. #2, 1953.
Glasser—Physical foundations of radiology. 2d ed., 1952.
Gray—The bile pigments. 1953.
Hartough—Thiophene and its derivatives. 1952.
Hofman—Imidazole and its derivatives. Pt. 1. 1953.
Luck—Bone and joint diseases. 1950.
Overholser—The psychiatrist and the law. 1953.
Schauffler—Pediatric gynecology. 3d ed., 1953.
Simpson—Condensed pyridazine and pyrazine rings. 1953.
Tasaki—Nervous transmission. 1953.
Tower—Differential diagnosis of common diseases of the eyeground. 1953.
Training and research in state mental health programs, 1953.

DERMATORRHEXIS: A CASE REPORT (THE SO-CALLED EHLERS-DANLOS SYNDROME)

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and
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In 1934, Tobias, in this country was the first to call attention to an unusual mesenchymal disturbance manifested by fragility and splitting of the skin, hypermobility of joints, and pigmented subcutaneous nodules of traumatic origin. Less frequently, this condition is associated with a peculiar hyperelasticity of the skin which earlier gave the syndrome the name of cutis elastica or India rubber skin. Although many reports have since been published in dermatological and pediatric journals firmly establishing the place of this disease entity, it still remains but little known in surgical circles.

This condition was described in the European literature by Kopp as early as 1888, but it remained for Ehlers who reported a case in a paper presented to the Danish Dermatological Society in 1899, and Danlos of France who reported his case in 1908 to clarify the symptomatology and to establish the syndrome as a new clinical entity. In 1936, Ronchese, in this country, correctly focused our attention on the prime importance of the fragility and splitting of the skin with its tendency to delayed healing and repeated wound disruptions as a clinical problem. He gathered a series of 24 cases and added 3 of his own. There obviously are many individuals that show hyperflexibility of joints with degrees of thinning and hyperelasticity of the skin and a tendency to bruise easily, which condition was classified as "formes frustres" by Tobias. However, only those cases that present the picture of repeated wound disruption and delayed healing become a surgical problem.

CASE HISTORY

At the age of 14 years, the patient, a white girl, accidentally struck the medial malleolar area of the right ankle with an axe while chopping wood. A small chip of bone was shaved from the tibia at the time of the accident. The wound was sutured after proper surgical cleansing. The scar remained closed for a short period of time, then underwent a repeated process of swelling, with burning sensation in the scar and, finally, spontaneous disruption of the wound without evidence of purulent infection.

Three years after this injury and after many repetitions of the above, the patient was readmitted to the hospital for surgical excision of the scar which had repeatedly failed to remain healed. After two surgical procedures in which the scar tissue was excised, the wound again continued to disrupt and showed an adherent scar draining a serous exudate.

Five years after the original injury, the patient was again readmitted to the hospital with the complaint that the wound failed to remain closed. The examination at this time showed no acute inflammation. There was local edema of the foot distal to the scar. The edges of the scar showed chronic cicatrix with adherence of the scar to bone. There was no sinus tract and the x-rays showed the underlying bone to be essentially normal. Surgery was again performed, consisting of a wide excision of the scar tissue and resection of the surface of the bone, then shifting of the periosteum over the raw bone edges and the sliding of a large skin flap over the original scar area. It was noted during convalescence that the wound edges were slow to adhere to each other and the intervening clot that formed was rather soft. The skin edges always remained viable. On removing the sutures 14 days after surgery, the wound edges gaped apart and tape was required to replace each suture as it was removed.

After a slow convalescence, the wound healed. Several months later the episodes of local swelling, itching and burning of the scar was noted and, again, the wound spontaneously disrupted from end to end but showed no inflammatory changes. This time the wound was closed with tape and skin clips. It again healed over with a crust formation and eventually became dry. Every few months thereafter, the same episodes of itching, swelling and disruption of the wound would recur.

Several other noticeable symptoms developed which led one to believe that the condition was not purely a local one. Purpuric spots would develop over both lower extremities, some as large as a silver dollar. It appeared that these episodes of purpura would occur about the time of the wound disruption.

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Extensive hematological tests were normal except for only a slight reduction of platelets which on one occasion was 90,000/mm.; but following a transfusion, the count rose to 182,000. Eventually, the platelet count was normal. Clot retraction test showed at one time: 1 hour very poor retractility, 24 hours partial retractility. Bleeding time was always normal. Three days later, after a transfusion, the clot retraction was partial after 1 hour. The rest of the blood studies were normal and the urinalysis was normal.

The blood transfusion seemed to hasten the healing of the ankle wound. Eventually the scar at the ankle became stabilized without keloid or cicatrix and has now remained normally healed for several years.

The patient was later readmitted to the hospital at three different times, 5/30/50, 6/6/50, 7/30/50, for spontaneous mediastinal and subcutaneous emphysema which was serious enough to require oxygen for respiratory distress. The emphysema extended down the right arm to the elbow, over the anterior chest up the neck, face and scalp. At about this time, an old scar in the mid part of the upper arm sustained years before when a fish hook was caught in the skin of the arm spontaneously disrupted. This wound was allowed to heal by simple adhesive tape dressings. The patient continued to have attacks of spontaneous mediastinal emphysema for as many as 12 times before this condition eventually healed. The lung fields were normal on x-ray examination except during the periods of mediastinal emphysema.

On November 12, 1950, the patient, at the age of 19 years, was operated on for an acute surgical abdomen. A right lower rectus incision was used. After removing the appendix, the operative wound was closed with catgut for the deeper layers and cotton for the skin. The wound healed per primam.

On January 25, 1951; June 15, 1951; November 18, 1951, and again on April 27, 1953, the superficial portion of the appendectomy wound separated throughout approximately three-fourths of its length. The line of separation was perfectly straight and the wound margins sharp as though cut with a razor. No tissue reaction was present, nor did any develop in the process of healing. A biopsy of the wound margin made November 18, 1951, showed "keratinization of the squamous epithelial layer with no evidence of collagen formation." The wound again required suturing for the recent disruption on April 27, 1953.

On April 24, 1953, the patient was examined because of a recurrence of purpura on the extremities. A small slowly healing laceration of the right index finger was treated by dressings. At this time the following laboratory studies were made by Dr. Henry G. Kupfer of the Clinicopathological Laboratories of the Medical College of Virginia. Three days later the appendectomy scar disrupted for the fourth time in two and one-half years.

HEMATOLOGICAL STUDY OF THE PATIENT

Test	Normal Values	Results
RBC	4.2-5.8 mill/cu. mm.	4,920,000
Platelet Count	400,000-600,000 cu. mm.	39/1000 291,880
Bleeding Time	1-3 min. (Duke)	5 min.
Clotting Time	5-10 min. (L & W)	8 min.
Clot Retraction	60 min.	good 1 hr.
Total Protein		6.8 gms. per 100 cc.
Albumin		4.9 gms. per 100 cc.
Globulin		1.9 gms. per 100 cc.
Fibrinogen	200-600 mg%	230 mg. %

A similar manifestation of this tissue instability occurred March 20, 1952, following two hypodermic injections over the deltoid region of the upper right arm. A marked inflammatory reaction developed eventuating in a slough in the skin at the site of each injection, measuring about 2½ and 3 cm. respectively. Healing failed to occur; and approximately one month later, the areas were grafted, using the Davis Pinch graft. The grafts took well and two weeks after grafting, the areas were healed.

Two and a half months later, the central two-thirds of each scar became necrotic and sloughed. This was associated with pain, numbness and a burning feeling in the arm. Four or five weeks were required for spontaneous healing.

Seven months later, a similar episode of spontaneous skin necrosis occurred in the old scars, followed by slow, gradual healing, leaving medallion shaped large scars at the site of each hypodermic injection.

DISCUSSION

Dermatorrhexis may appropriately be considered the reverse of scleroderma. This condition is sometimes hereditary but usually is recorded as an isolated case. The anomaly becomes apparent in infancy or childhood and persists throughout life.

Ronchese conceived the disease to be based upon an abnormality of the mesenchymal tissues. Other defects may be associated with this condition, such as mental retardation, congenital defects, tetralogy of Fallot; and, as in this case, repeated attacks of mediastinal and subcutaneous emphysema from repeated spontaneous rupture of alvealar blebs. M. L. Samuels, *et al.*, reported a case with prolonged post partum bleeding. The purpuric spots in his case were similarily described.

The initial onset of symptoms is usually associated with trauma. The many minor bruises sustained in childhood may manifest themselves as poorly healing scars over the exposed areas, such as the shin, knees, elbows, forehead, etc. A slight bruise may cause the skin to burst or split, showing a clean sharp bordered laceration described as a fish mouth laceration. These wounds do not heal well when sutured but do better when the edges are pulled together by adhesive tape or even just dressed and allowed to slowly granulate. The wound will eventually heal but may continue to show cycles of swelling of the scar, bullae formation and pseudokeloid formation followed by spontaneous disruption of the wound from end to end. The scar characteristically disrupts *in toto*. In this case, ecchymotic areas would periodically develop over the extremities, some as large as a silver dollar, others more petechial in size, which would presage old wound disruptions or new episodes of mediastinal emphysema. The scar would itch, swelling of the surrounding tissues would develop, the scar would become elevated, reddened and bleb formation would be noted—all forewarning disruption of the scar. The Rumpel-Leede test may, as in this case, be positive periodically. The disruption of the scar is associated with brisk hemorrhage which subsides to a sanguineous ooze. The wound slowly granulates and an eschar forms. Eventually, healing becomes complete with a widened scar. The defective tissue appears to be in the corium layer while epithelialization apparently proceeds normally. This is borne out by the fact that superficial pinch graft donor sites heal satisfactorily, and deep intra-muscular injections of drugs, such as penicillin, produce no hematoma or disturbance in muscle tissue. Subcutaneous injections where the medication or drug lies in the corium layer of the skin as in this case produces poorly healing wounds.

The elastic skin feature is less often seen, but, when present, the general character of the skin is smooth, soft, and apparently somewhat thinned. In certain cases, the skin is extraordinarily supple and elastic and, when a fold is drawn out from the body and released, it may return to its original position with an audible snap like that of a rubber band. The laxity is especially marked about the large joints. It may be general or confined to certain regions. A velvety texture is notable, and the skin glides easily over the underlying tissues, the fat layer being often atrophic. This patient showed typical relaxation of joints, a condition commonly called "double jointedness" but not the cutis elastica feature.

The blood chemistry tests give usually normal results. The only positive findings in this case were an inconstant delayed clot retractility time and on one occasion a slight diminution of the platelets. The purpuric areas developed rather spontaneously and subsided similarly, although the development of the purpuric spots was also associated with redness and edema of the most recent scars, but not the old scars. Recent examinations again showed a crop of purpuric spots on the extremities associated with the recent sloughing of the old skin grafted wound on the right arm on February 15, 1953, and a new crop presaging the disruption of the appendectomy scar on April 27, 1953.

Histologic study of the tissues does not give constant findings; however, certain observers reported a defect in the structure of the collagen fibers. Some observed the collagen fibrils as being elongated and wavy and probably intrinsically defective. Apparently the elastic fibers are not abnormal. Samuels reports an atrophy of the epidermis with blunting of the rete pegs and the increase and fragmentation of elastic tissue. When pseudo-tumors are present, giant cells of the foreign body type are numerous beneath the atrophic epidermis.

CONCLUSION

A case of Ehlers-Danlos syndrome is reported in which attention is called to the surgical problem of delayed skin wound healing and repeated wound disruption.

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Miami Society Conducts Plaque Poll.

Universal display of the AMA plaque, "To All My Patients," in doctors' offices was recommended by the majority of the Miami, Fla., physicians responding to a recent informal poll conducted by the Dade County Medical Association. Many favorable comments on the plaque were received from physicians whereas only one doctor gave a definitely unfavorable response. Typical patient comments noted by these physicians ranged from "a good idea" to "glad to see we have a humanitarian amongst the profession." Only one doctor reported a negative patient response which implied that medicine is "becoming too commercialized."

This poll brings out the fact that most patient fee questions concern the cost of doctors' services, the cost of hospital services, making arrangements to pay doctor bills and insurance. From the doctor's point of view, the discussion of fees was indicated to be "easy" by 42 per cent of the group, "relatively easy" by 35 per cent, "fairly difficult" by 15 per cent and "difficult" by only 8 per cent. The questionnaires were distributed to 112 physicians—representing a cross section of the medical society membership—about a month after some 1,000 plaques had been distributed free by the local society.

To help practicing physicians create better relations with their patients, the American Medical Association is continuing to offer this plaque for one dollar, postpaid. Direct your requests for the plaque to the Order Department, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

School Health Film Now Available.

How a typical town in Oklahoma recognized its school health problems and, through community effort, launched a plan to solve them is the subject of a new film which has been added to the AMA motion picture library. "School Health in Action"—a sound and color film—was produced for the Oklahoma State Department of Health with the cooperation of the Oklahoma State Medical Association. The service charge for this film is two dollars. Requests should be made to the AMA's Committee on Medical Motion Pictures.

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NOTES ON TUBERCULOSIS*

Symptoms

Years ago one of the savants in our profession declared: "You cannot diagnose a disease unless you think of it."

This is not merely a trite aphorism applicable to a bygone era but a succinct statement expressing a conclusion based upon commonplace observations and experiences that recur even to this day.

There are times when only to think of a disease is to solve almost instantly a knotty diagnostic problem that has weighed heavily upon the attending physician for days or weeks.

In the past, even more so than at present, a large number of cases of tuberculosis have been found to have had far advanced disease by the time they were diagnosed. True, many became spreaders of infection months before they became ill, or ill enough to consult a physician. On the other hand, many had consulted their physician months or years before their symptoms became sufficiently intense or spectacular to *compel* consideration of tuberculosis as a possible cause; the disease was finally diagnosed—as soon as it was thought of.

Great strides have been made in case-finding in the field of pulmonary tuberculosis since the advent of mass x-ray screening of the lungs of apparently healthy persons. But, until such time as everyone has been processed at least once, to say nothing of periodically, in this manner, patients with pulmonary tuberculosis will continue to present themselves to their family physicians for relief of symptoms caused by the disease. Not all of the cases will have advanced tuberculosis when the doctor is first consulted. Most of them will have greater involvement than the majority discovered with active lesions following community survey.

Symptoms which should invariably alert the family physician to the possible presence of tuberculosis are:

1. Persisting ease of fatigue, not easily accounted for and/or promptly relieved by the patient or his physician.
2. Unexplained loss of ten pounds or more in weight.
3. Unexplained loss of appetite.
4. Persistent unexplained chest pains (particularly sharp PLEURISY pain). Pleurisy with effusion should always be considered tuberculous until proven otherwise. Chest x-rays should be taken at once following absorption or withdrawal of the fluid and periodically thereafter, for at least a year, regardless as to how well the patient appears to be. (Needless to say, should malignancy be suspected, every effort will be made to exclude tuberculosis as soon as possible).
5. Hemorrhage from the lungs; if the blood seems to come from the lungs, it does come from the lungs for all practical purposes, and is due to tuberculosis until proven otherwise. Until recent years pulmonary hemorrhage was so often found to be tuberculous in origin that such a symptom was almost tantamount to diagnosis. At least fifty percent of pulmonary hemorrhages are today known to be caused by diseases or conditions other than tuberculosis; however, the adage stills holds.
6. Unexplained cough of a month or more duration (don't permit your patient to be so unrealistic as to attempt to attribute a two months' cough to a fifteen years' smoking habit—as has been done).
7. Expectoration; is not necessarily associated with cough—it may be accomplished simply by "clearing the throat." Sputum may be of *any* character, as measured by color, consistency or volume.
8. Fever. While this may occur early in tuberculosis it is seldom, unless acute, observed as a presenting symptom; most likely you will have been consulted for relief of one or more of the other symptoms listed, where the patient proves to be mildly febrile. The patient should be instructed to take his temperature four times daily to confirm or exclude the presence of low grade fever.
9. Cold night sweats (are usually not the first symptom to appear).
10. Unexplained and persistent nervousness or indigestion.
11. Recurring colds.

*Prepared by the Virginia State Health Department.

12. Failure to recover rapidly and completely from *any* acute illness or serious accident (including pregnancy).
13. Abrupt or intermittent hoarseness, particularly when unassociated with acute upper respiratory infection.
14. Peri-rectal abscess.

Even where a given symptom is recognized in and of itself to be characteristic of tuberculosis, the age-old practice of discounting the presence of one symptom because of the absence of another has been responsible for many tragic delays in diagnosis. For example, patients have been known to ignore a chronic cough and/or expectoration for months because they did not *also* tire easily or *lose* weight (and vice versa).

Actually, *any* of the symptoms enumerated may be the first to appear and for a variable and sometimes very long period may persist as the sole or chief symptom. As time goes on the still unsuspected or unrecognized progressive case develops additional symptoms which also may occur in any order or conceivable combination. No matter what single symptom or set of symptoms might be chosen from the list, arranged in any order of sequence or intensity, there would be created the exact clinical picture of someone somewhere suffering from pulmonary tuberculosis.

No particular symptom or set of symptoms means any more necessarily than any other with reference to the total amount of lung involved or the patient's ultimate prospect for recovery. Each group may simply represent a different manifestation of the same stage of the disease, in different individuals. Why one person has a hemorrhage instead of cough, while another has pain instead of loss of weight, with approximately corresponding involvement of the lungs, no one knows any more than why, as a result of the same sudden loud noise, one person jumps, another screams and still another faints.

It is of course unnecessary to remind that most if not all of the symptoms listed can be caused by conditions or diseases other than tuberculosis but the presence of one or more which cannot be promptly explained and relieved should suggest a thorough examination of the lungs (including x-ray).

In the aging, evaluation of symptoms, and ultimate diagnosis, can be as difficult as they are important. In the later decades of life the prevalence of chronic debilitating conditions simulating tuberculosis on x-ray and otherwise, is well known.

Sometimes elderly persons take varying degrees of systemic rest solely as a concession to infirmities accepted and attributed to "advancing years". In so doing they may alter their life pattern sufficiently to forestall rapid spread of an underlying tuberculous lesion; because of the purely coincidental and therefore usually only partially adequate treatment, the disease smoulders on, gradually progressing, unsuspected for months or years, until, at long last, the sputum is examined, or the patient dies, or a favorite grandchild, contracts tuberculous meningitis.

Tuberculosis has been increasingly recognized in recent years as a disease responsible for many deaths in the later decades of life. Too often in elderly persons the presence of tuberculosis can be proven *only* by recovery of the Tubercle Bacillus from the sputum or gastric washings.

The best way to protect children and *grandchildren* from tuberculosis is to examine parents and *grandparents*.

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MENTAL HEALTH

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Psychiatric Social Work*

Psychiatric social work[1] is social work undertaken in direct and responsible relation with psychiatry. It is practiced in hospitals, clinics, or other psychiatric auspice as a part of a clinical team including psychiatrists, psychologists and in many instances psychiatric nurse, occupational therapists, and other professional personnel concerned with the treatment of patients and the extension of psychiatric services. Its aim is to contribute to those services and activities within the community which promote mental health and are conducive to the restoration of the health of individuals who are suffering from mental and emotional disturbances.

The primary area of practice of the psychiatric social worker has been social casework applied in diagnosis and treatment of persons with personal and social maladjustment caused or aggravated by mental and emotional problems. One of the differentiating factors in the functioning of the psychiatric social worker is the fact that the casework service must be coordinated with the contribution of the other members of the clinical team in which the psychiatrist has the ultimate responsibility for leadership and direction. Casework in the psychiatric setting carries specific emphases that derive from this collaborative effort. Specific skills and knowledge which the psychiatric social worker acquires through training and experience include: an understanding of the behavior of persons who are mentally or emotionally ill and the reaction of family members to severe emotional illness, a knowledge of the social and environmental circumstances that may contribute to this illness or may affect the adjustment and the care of the patient, skill in utilization of community resources to the end that the available service most likely to be of help to a particular patient and his family may be wisely selected and productively used; and ability to differentiate and to integrate this professional service in a collaborative relationship with the other disciplines functioning within the psychiatric team.

A fully qualified psychiatric social worker is one who has had either specialized education in class and field as a part of his social work training plus a period of practice in a psychiatric setting, or has completed his social work training plus a longer period of supervised psychiatric social work practice.

The field of practice includes social work with individuals and groups, supervision, teaching, administration, consultation, participation in education of related professions such as medicine and nursing, research and collaboration in the development of mental health programs and community education.

PSYCHIATRIC SOCIAL WORK PRACTICE

The primary settings in which psychiatric social workers are engaged in direct services to patients are psychiatric hospitals and clinics under governmental, federal, state, local or community sponsorship. Modern psychiatry sees the mentally or emotionally ill patient as a human being intricately related to his social environment, particularly his family. He is a total person with many needs and many strengths and is not to be regarded as an isolated specimen of pathology. Treatment of the sick individual is accomplished through the team approach with each professional discipline adding their special skills in order to meet his needs. The social worker plays a particularly important part in this plan of treatment by providing a link between the patient and his family . . . and his community . . . and between the hospital and clinic and the community of which it is a part. The social worker also works directly with the patient in helping him mobilize his personal resources in his efforts toward recovery.

In psychiatric hospitals, the social worker assumes responsibilities with both the patient and his family which shift throughout treatment and after care. At the time of admission the social worker helps the patient understand the facilities for treatment that are available and assists him in his use of them. The family is helped to understand the meaning of the patient's illness and to alleviate stress that may

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be related to his hospitalization. The social worker provides the other members of the therapeutic team with social, economic and environmental information which is important for diagnosis and treatment. Throughout the period of the patient's hospitalization the social worker seeks to maintain a continuity of responsibility for the patient with both the family and the community. At the time of the patient's discharge the social worker helps the family to make the readjustments necessary for the patient's return home. The social worker also assists the patient in his planning for discharge and return to the community. If it is impossible for the patient to return to his home, care in a foster home may be arranged. In many hospitals, the social worker is the key person in this care program. He mobilizes both individual and community resources to assist the patient in his rehabilitation and maintains a continued contact with the patient after his return to the community.

Traditionally, psychiatric clinics have had social workers as staff members. The size and team relationships with clinic staffs have led to a close interdisciplinary cooperation and wide use of social services. The social worker may collaborate in the treatment of the patient or he may be given the direct responsibility for treatment. As in the psychiatric hospital, the social worker in the clinic provides the continuity for the patient and his family and maintains liaison between the clinic and the community. Specific contributions which the psychiatric social worker makes to the clinic include: establishing the suitability of the agency's service for meeting the applicant's need, assisting the patient in his use of the available services, helping him with his feeling about his problems and making necessary referrals to other community resources, contributing knowledge of the patient and his history toward development of a working diagnosis and treatment plans, rendering direct service to the patient and others in his environment as indicated by the treatment program, facilitating use of his own assets to strengthen his efforts for a more satisfactory adjustment. The social worker in the clinic is also active in the interpretation of the clinic's program and in the preventive work of community education for mental health.

Psychiatric social work practice encompasses more than the functions directly related to patient care and treatment outlined above. The psychiatric social worker in a clinic or hospital may have responsibility as a supervisor or administrator for other social workers. In many clinics he may carry administrative responsibility for the total clinic. He may be engaged in teaching other disciplines or in individual or multi-discipline research. On federal, state or local levels the psychiatric social worker may represent the clinical team as a consultant to other staff members or to related community health and welfare services. He may also actively work in the education of the community in mental health concepts and promotional services for community mental health programs.

A grant from the National Institute of Mental Health enabled the American Association of Psychiatric Social Workers to make a study of practice in psychiatric hospitals and clinics in 1950. (The report of this study is to be published during 1953.) The findings of this study give a detailed picture of the activities of the social worker in psychiatric hospitals and clinics and suggests areas for future research and development.

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(1) For current information regarding development in the psychiatric social work field the reader is referred to American Association of Psychiatric Social Workers, 1860 Broadway, New York 23, N. Y.

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MEDICO-LEGAL NOTES

The Doctrine of Aggravation Under the Virginia Workmen's Compensation Law

The doctrine of aggravation has been accepted by either specific legislative enactment or by judicial interpretation in most states, including Virginia, for some years.

Briefly, this doctrine says that a workman who has a pre-existing disease, or disability due to injury, non-industrial in origin, may materially aggravate this disease or disability, whether latent or manifest, by an accident or illness causally related to the employment, so as to cause the ensuing jointly produced disability or death to become compensable.

The presence of a pre-existing non-industrial ailment which renders the workman more susceptible to a second illness or injury, or the fact that second illness or accident, produced by the work, would not have been sufficient to cause the resulting disability or death in the absence of pre-existing disability is not material. The employer accepts the employee as he finds him.

Disability or death, occurring during the course of the employment, from the natural progress of a non-industrial disease or injury which pre-dates the employment, or even from one which has its onset during the employment tenure, but is otherwise unrelated to the employment, is not compensable. Mere exertion at work, which is not greater than that ordinarily incident to the particular employment, but which combines with pre-existing non-industrial disease or disability to produce disability or death, is not compensable as an accidental injury or death.

If the evidence in the particular case shows that it is just as likely that the disability or death resulted from the natural course of a disease or injury, not produced by the work, as it is that the disease or injury was materially aggravated and altered in its course by a superimposed work-produced injury or illness, then the claimant has not sustained his burden of proof. Speculative aggravation is insufficient when the known course of the pre-existing disease or disability is expected to produce the same course of events.

When the aggravating industrial factor occurs subsequent to and is superimposed upon a previous non-industrial disease or accident, if the effects of the aggravating influence can be clearly or reasonably delimited, then the compensation may end where this aggravating influence ceases to play a role in the continuing symptomatology. For example, a person with hypertrophic arthritis of the spine may suffer a worked-produced acute back sprain or strain. There may be an interplay or mutual aggravation of symptomatology of the two conditions over a period of some weeks. Following this period, however, the symptomatology produced by the acute back sprain or strain will cease to operate, and the continuing symptomatology may be due to the pre-existing hypertrophic arthritis alone. A workman with a metastatic bone carcinoma may, through trauma at work, suffer a pathological fracture and subsequent disability. Such disability might be compensable for as long as it lasts. However, when death, due to the neoplastic process, eventually supervenes, the death itself should not be compensable.

The term aggravation also enters the field of Workmen's Compensation in other respects:

1. A disease or injury originally compensable may be aggravated by a superimposed injury or illness following naturally in the course of events, though not work-produced, per se, or it may be aggravated by injudicious treatment. In either event, the resulting disability or death is compensable.
2. An industrial accident or disease may be aggravated by a supervening industrial accident, illness or exposure associated with a different employer. This occurs frequently in silicosis. Here the claim is properly made against the second employer.
3. An industrial illness or disability may be aggravated by a pre-existing non-industrial disease or disability. Here again the doctrine that the employer accepts the employee as he finds him may be applied.

The Industrial Accident Commission has some access to impartial medical advice and may take administrative cognizance of sound medical principles where medical testimony is not presented in the hearing of a claim, on behalf of either party. In cases where there is medical testimony submitted,

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the Commission cannot ignore such testimony in reaching its decision. The courts, in general, must decide each case on the evidence and the testimony presented in that case. If such testimony is not consistent with sound medical principles, if speculation is labeled as fact, or if sound opposing testimony is not submitted, the result of the case may be warped.

The term "material aggravation" has been used interchangeably with "aggravation" many times. It is probable that a material aggravation is necessary before sufficient scientific evidential criteria are present to take the situation beyond the realm of speculation. The law does not require complete scientific proof of aggravation, but on the other hand, physicians, as men of science, should not rely on "*post hoc ergo propter hoc*" relationships, without additional evidence.

The bulk of troublesome cases today, from a medical viewpoint, arise with reference to aggravation of a pre-existing disease or disability by an industrial accident or illness. Those pre-existing diseases which produce the most difficult problems fall in the group of metabolic or degenerative diseases, including malignant neoplasms and diseases of the vascular system, skeletal system, nervous system, and organs of hearing and sight, or in the group of mental disorders.

Too strict an interpretation of the doctrine of aggravation may deprive the workman of the benefit of a law designed primarily for his protection. On the other hand, too liberal an interpretation may create general health insurance for a small group at the expense of the consumer population at large and create a class of medically unemployable persons, such as diabetics, or persons with prior coronary heart disease, even though these persons remain physically able to perform many employment activities.

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BOOK ANNOUNCEMENTS

Review of Physiological Chemistry. By HAROLD A. HARPER, PH.D., Professor of Biochemistry, University of San Francisco, Lecturer in Surgery, University of California School of Medicine; etc. Fourth Edition. Lange Medical Publications, University Medical Publishers, Los Altos, California. 1953. 328 pages. Price $4.00.

Respiratory Diseases and Allergy. New Method of Approach. By JOSEF S. SMUL, M.D., Associate Castro-Ent. Beth David Hospital; Clinical Assistant Physician, Beth Israel Hospital, New York; etc. Medical Library Company, New York. 1953. 80 pages. Price $2.75

Cure Your Nerves Yourself. By LOUIS E. BISCH, B.A., M.D., PH.D. Wilfred Funk, Inc., New York. 1953. 247 pages. Price $3.50.

Films in Psychiatry, Psychology & Mental Health. By ADOLF NICHTENHAUSER, M.D., MARIE L. COLEMAN, and DAVID S. RUHE, M.D. Medical Audio-Visual Institute of the Association of American Medical Colleges. Health Education Council, New York and Minneapolis. 1953. 269 pages. Price $6.00.

The Nursing Mother. A Guide to Successful Breast Feeding. By FRANK HOWARD RICHARDSON, M.D., F.A.C.P., F.A.A.P. Prentice-Hall, Inc. New York. 1953. 204 pages. Price $2.95.

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PUBLIC HEALTH

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Diphtheria

Those who studied bacteriology a good many years ago will remember that the Klebs-Loeffler bacillus causes diphtheria, while more recent students of bacteriology will recognize the etiologic agent as Corynebacterium diphtheriae. Regardless of the period to which one belongs, everybody recalls that the disease is more common in fall and winter months and in temperate zones. These facts fix our attention on diphtheria now, during the prevailing season in a temperate climate.

It is interesting to have a look at the morbidity and mortality of diphtheria in Virginia from 1920 to date:

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Deaths
1920	269	183	134	127	71	85	74	140	430	1060	1050	747	4370	334
1930	226	181	144	81	70	61	60	106	186	387	395	313	2210	172
1940	72	59	56	47	29	25	19	53	44	89	128	88	709	51
1950	23	22	23	11	4	10	4	5	30	23	18	19	192	11
1951	14	18	12	8	11	5	4	4	12	38	41	27	194	8
1952	10	12	5	9	8	2	6	4	17	40	37	16	166	11
1953	20	9	15	1	3	3	2	3	7	9	8		80*	4*

*Total to date, 1953

The general pattern of prevalence is followed with the highest number of cases in the fall and winter months. We note that in 1930 there were approximately one-half the number of cases of diphtheria that were reported in 1920. By 1940 only one-third the number of cases as in 1930, and in 1950 there were a few more than one-fourth the number of cases that existed in 1940. Likewise the number of deaths per year has fallen.

During the past three years several counties and two or three cities have been reporting a greater number of cases of diphtheria than the rest of the state. This higher incidence is in areas that are essentially rural or that have large Negro populations.

It has been thoroughly established that the remarkable reduction in diphtheria morbidity, with the resulting reduction in mortality, has been brought about through the widespread use of agents which produce active immunization. All children should be immunized against diphtheria. The following procedure is recommended: From 2 to 6 months of age two adequate doses of diphtheria toxoid, with pertussis vaccine, should be administered within a one-month interval. This basic course of inoculations must be reinforced by at least one booster dose within 3 to 12 months. If diphtheria is to be more effectively controlled, the giving of reinforcing doses in preschool life, on entrance to school, and throughout school life and early adulthood, must be considered. Immunization should not be neglected in infancy, but in those cases when failure to immunize has occurred, the program should be carried through as soon as opportunity arises. Either fluid toxoid or alum precipitated toxoid may be given. The latter preparation produces a more rapid response but may cause tissue injury, especially in adults.

The test for immunity commonly used is the Schick test. In making this test 0.1cc of a solution containing one-fiftieth of the minimal lethal dose of toxin is injected into the skin of the flexor surface of one forearm and a control injection is made into the corresponding area of the other forearm. The control material is the same toxin which has been heated to 60 degrees C. for fifteen minutes. A reading is made at the end of 24 hours and again at the end of 48 hours; in a positive reaction a wheal develops at the site of the first injection and increases in diameter to about 3 cm. or more and remains for a week. As it grows older the center becomes a darker red and may turn brown and desquamate. This result indicates susceptibility to diphtheria if there is no reaction around the control injection. Relative immunity is indicated by the lack of reaction of both arms. A limited, equal reaction in both arms would

indicate a protein reaction, known as a combined reaction. When this occurs, caution must be used in immunization.

Adults who are more apt to be exposed to diphtheria, such as medical students, interns and residents, nurses, hospital attendants and practicing physicians, should be Schick-tested and fluid toxoid may be given to those who show positive reactions.

It is the aim and object of the State Department of Health to have the number of cases of diphtheria in Virginia brought to an irreducible minimum and the number of deaths in the state from this disease to the zero mark.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Nov. 1953	Nov. 1952	Jan.-Nov. 1953	Jan.-Nov. 1952
Brucellosis	4	9	56	43
Diphtheria	8	37	80	150
Hepatitis	247	172	2306	790
Measles	77	64	4742	15643
Meningitis (Meningococcic)	3	22	169	187
Poliomyelitis	41	43	721	666
Rocky Mt. Spotted Fever	0	3	59	78
Scarlet Fever	71	120	774	715
Tularemia	5	1	30	43
Typhoid & Paratyphoid	8	8	78	89
Animal Rabies	30	32	411	434

Sensitivity to Penicillin Counteracted by Antihistamines.

Use of an antihistamine in conjunction with penicillin in a penicillin-sensitive patient may permit the patient to receive full benefit from the drug without danger of severe reactions, according to Dr. C. A. Beck, Chicago.

Writing in the November 28 Journal of the American Medical Association, Dr. Beck described the case of a 49-year-old woman who suffered from a bacterial infection in the lining of the heart. Because of her sensitivity to penicillin she was treated with numerous other antibiotics, all of which failed to alleviate the infection.

When the patient's condition became worse despite treatment, a penicillin-antihistamine regimen was instituted. No adverse reactions were noted and after several months of therapy she was discharged as cured, he added.

"This result is particularly significant because other antibiotics, to which the patient was not sensitive, failed to achieve the desired clinical response, and because of the severity of the previous penicillin reaction in the patient," it was pointed out by Dr. Beck, who is associated with the department of medicine at Michael Reese Hospital.

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Medical Society of Virginia Cancer Committee

Chairman, George Cooper, Jr., M. D.

Albemarle Hotel Building, Charlottesville, Va.

Reprints of this and preceding Bulletins may be obtained from this office

January 1, 1954

Tumors in Children

Based on the Pfizer Spectrum in the J. A. M. A., Nov. 28, '53.

The rapid increase in cancer deaths in people over 40 which has occurred during the past fifty years causes us to minimize the incidence of cancer in children. Yet in children aged one to 14, cancer causes 10 per cent of the deaths due to disease. Cancer mortality in children aged one to four is nearly twice that at nine to 14. In children aged three to 14, accidents cause the greatest number of deaths, cancer the second greatest number.

The kinds of malignancies seen most frequently in children are not those seen most frequently in adults, and their behavior is different. The following tabulation of information about the most common childhood malignancies may be helpful.

	Signs and Symptoms	Primary Site	Diagnosis	Treatment in an Attempt at Cure	Survivals	Palliative Treatment
Leukemia	Hemorrhagic phenomena Bone and joint pain Anemia Thrombocytopenia Leukopenia or leukocytosis Immature leukocytes in peripheral blood		Bone marrow biopsy	None	Remissions but no cures	Antifolic acid drugs Corticotropin Cortisone Radiation therapy
Neuroblastoma	Abdominal mass Mediastinal mass Hepatomegaly Exophthalmos Bone pain	Adrenal Retroperitoneal region Posterior mediastinum	Histologic examination of primary tumor	Surgical removal of primary tumor followed by radiation therapy	30 per cent three-year survivals — a few cases considered cured	Radiation therapy Nitrogen mustard Antifolic acid drugs Corticotropin Cortisone
Wilms' Tumor	Abdominal mass	Kidney	Histologic examination of primary tumor	Nephrectomy Postoperative radiation	47 per cent two-year survivals — a few cases considered cured.	Radiation therapy
Intracranial Neoplasms	Vomiting Headache Visual disturbances	Usually infratentorial	Histologic examination of primary tumor	Surgical removal Irradiation of medulloblastoma	Varies with type and site of neoplasm — 13 per cent five-year survivals	Radiation therapy
Ewing's Tumor	Pain Tumor	Often in bones of legs but may occur in any part of skeleton	Roentgen examination plus histologic examination of primary tumor	Irradiation only? Amputation when in an extremity?	Long term survivals rare	Radiation therapy
Osteogenic Sarcoma	Pain Tumor	Usually in bones of legs	Roentgen examination plus histologic examination of primary tumor	Amputation	A number of five-year survivals without recurrence	Radiation therapy?

It should also be noted that there are a few cases of lymphosarcoma in children which are considered cured, and that a number of cases of retinoblastoma have been treated successfully.

So the outlook for children who develop cancer, while grey, is not the complete black still pictured by many people. And best of all, the picture is growing brighter all the time.

To give these youngsters their best opportunity for successful therapy, the lesions must be discovered early. Cancer should be suspected, not only when the signs and symptoms tabulated above are found, but whenever a baffling illness or disturbance of development or behavior is encountered.

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THE MEDICAL SOCIETY OF VIRGINIA

Annual Public Relations Conference

The Annual Public Relations Conference of The Medical Society of Virginia was held on Tuesday, November 24, at Richmond's Hotel John Marshall. The Conference was attended by forty-four physicians, representing twenty-three component societies, and 27 ladies, representing 22 active or potential auxiliaries.

Dr. Vincent W. Archer, President of the Society, and Mrs. K. W. Howard, President of the Woman's Auxiliary to The Medical Society of Virginia, opened the Conference with words of welcome, after which the presiding officer of the morning session, Dr. James P. King, was introduced.

The value of an Auxiliary was stressed by Dr. Frank J. Holroyd, member of the West Virginia Council, who said, "The most valuable thing we learned in West Virginia was the value of an auxiliary." He added that the ladies have gone on to push—successfully, too, for a medical school, to sparkplug a nurse recruitment program, to support blood banks, tuberculosis and health clinics. In addition, they sponsor a doctor's day and a health week. A special project the ladies undertook was to make and sell paper flowers at the state convention. The men buy them and the women wear them instead of orchids and the money goes to the American Medical Education Foundation.

A step by step blueprint on "How to Organize an Auxiliary on a Local Level" was then presented by Mrs. Maynard R. Emlaw, President-Elect of the Woman's Auxiliary to The Medical Society of Virginia. It was pointed out that with 46 component societies and only 12 active auxiliaries, there exists a real organization job.

A public relations program for the state and local auxiliaries was outlined by Mrs. R. M. Reynolds, Norfolk, Chairman of the Public Relations Committee of the State Auxiliary. Mrs. Reynolds stressed the fact that an informed membership is the best possible basis for a sound public relations program.

Successful auxiliary projects were then described by a panel moderated by Mrs. Leo J. Schaefer, Salina, Kansas, President of the Woman's Auxiliary to the American Medical Association. Mrs. J. R. St. George, Norfolk, told how future nurses' clubs are organized in the Norfolk area. A report on the activities of the Hospital Guild for the Petersburg General Hospital was presented by Mrs. Herman W. Farber. The Guild helps in sewing and mending, mail delivery, hostess work, etc. The Richmond Auxiliary's luncheon to acquaint civic club leaders with health needs and activities was described by Mrs. Custis L. Coleman. Mrs. M. W. Glover told how the Arlington Auxiliary sponsors sales of articles made by patients at Blue Ridge, Catawba and Pine Camp sanatoria and the Woodrow Wilson Rehabilitation Center. The "Working with other groups" approach to good PR was described by Mrs. Paul C. Pearson of the Northern Neck Auxiliary.

The Conference luncheon featured a talk by Dr. W. W. Bauer, Director of the Bureau of Health Education of the A.M.A., on "Patients and Impatience." Dr. Bauer told of what great effect "little things" have on good PR and quoted several letters recently received by the A.M.A. which proved his point.

With Dr. John T. T. Hundley, Lynchburg, presiding, the afternoon session was opened by Dr. Christopher J. McLoughlin, Atlanta, Georgia, who explained just how medical public forums are sponsored by the Atlanta society. He lauded the efforts of the Atlanta newspapers and stated that the forums could not have been presented without their help. According to Dr. McLouglin, the forums are attended by "standing room only" crowds.

As a follow-up, Mr. Jack Kilpatrick, Editor of the *Richmond News Leader,* commented on the possibility of presenting a series of forums in Richmond, and expressed the belief that his paper would cooperate in every way possible. Mr. Howard Hamrick, of radio station WRNL, was optimistic concerning the radio appeal of such forums.

The T-V film "Operation Herbert" was shown in order that the group might become acquainted with the type of films available through the A.M.A. It was brought out that this film and a short series entitled "What To Do" have proven quite popular with television stations generally and their message is most worthwhile.

A short demonstration of the proposed joint PR Course for Physicians and Office Personnel was given with the request that those present inform the state office of their reactions. The demonstration

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Left to right: Mrs. J. R. St. George, Mrs. M. W. Glover, Mrs. Herman W. Farber, Mrs. Leo J. Schaefer, Mrs. Paul C. Pearson, Mrs. Custis L. Coleman, and Mrs. R. M. Reynolds

Left to right: Mrs. Leo J. Schaefer, Dr. John W. Davis, Jr., Dr. W. W. Bauer, Mrs. Maynard R. Emlaw, Dr. James L. Hamner, and Mrs. Christopher J. McLoughlin

was highlighted by a playlet depicting the right and wrong ways of handling office telephone calls.

Dr. Charles Caravati, Richmond, Chairman of the Society's special committee on Federal Medical Services, reported the stand of the A.M.A. (and The Medical Society of Virginia) on the care of veterans with non-service connected disabilities (excepting tuberculosis and psychiatric or neurological disorders). Dr. Caravati urged those present to acquaint themselves with the issues in order that all physicians can be properly informed.

Left to right: Mrs. K. W. Howard, Mrs. Maynard R. Emlaw, and Mrs. Leo J. Schaefer

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A.M.A. PR Conference

The Sixth Annual PR Conference of the American Medical Association was held at the Jefferson Hotel in St. Louis on November 30.

Dr. Walter B. Martin, Norfolk, President-Elect of the A.M.A., delivered the keynote address and described medical public relations "not as a means of putting ourselves in a better light before the public but as a way by which we can learn better how to serve the public."

Speaking to an audience of more than 300 physicians and medical society public relations personnel, Dr. Martin continued, "If our judgment is given honestly and fearlessly for the common good, it should and will carry weight. If it is founded on ignorance or colored by self interest, it will be disregarded."

The luncheon session featured a talk by Dr. Leo H. Bartemeier, Detroit, Chairman of the A.M.A. Committee on Mental Health, who said that failure to understand what motivates patients tends to alienate them from physicians. He urged doctors to try to understand such basic motives as fear and a feeling of insecurity.

During a morning symposium on "Making a PR Program Work", Dr. Josephine Renshaw, Washington, D. C., pointed out the need of a new name for public relations. "Public Information and Service" was suggested as a good substitute.

Speaking in a similar vein during an afternoon session on "Mending Our PR Fences", Dr. David W. McCarty, Longmont, Colorado, suggested that Grievance Committees be called "Mediation" or "Public Service" committees. It was brought out that many believe the word "grievance" to be too direct and harsh.

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WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. K. W. HOWARD, Portsmouth
President-Elect—MRS. MAYNARD EMLAW, Richmond
Recording Secretary—MRS. LEE S. LIGGAN, Irvington
Corresponding Secretary—
MRS. LEMUEL E. MAYO, Portsmouth
Treasurer—MRS. WILLIAM C. BARR, Richmond
Publication Chairman—MRS. WM. S. GRIZZARD, Petersburg

Northampton-Accomack.

The last meeting of this Auxiliary was held at the home of Mrs. John R. Freeman. Following refreshments and a social hour, Mrs. John R. Hamilton, retiring president, presided over the business meeting. This included committee reports for the year, among them one from Mrs. William T. Green, Jr., as to additions made to the Grace Wilkins Holland room at the Northampton-Accomack Hospital, and a full report by Mrs. S. E. Ames of the Auxiliary meeting at the recent meeting of The Medical Society of Virginia in Roanoke.

New officers for 1954 were named as follows: President, Mrs. E. E. Mihalyka; president-elect (to take office in 1955) Mrs. John R. Mapp; secretary, Mrs. S. E. Ames; treasurer, Mrs. W. A. Eskridge.

Dr. Thomas B. Hardman then showed interesting slides in color of scenes he had photographed in Korea and told of some of his experiences while in that country.

CATHERINE B. TROWER (MRS. HOLLAND)
Publicity Chairman

Richmond Academy.

Richmond's charitable hospitals and institutions are richer by $8,200 worth of drugs donated by the Auxiliary to the Richmond Academy of Medicine. Samples, sent by wholesale firms to doctors' offices, were collected by the members and, with the help of Medical College of Virginia pharmacy professors and students, sorted the drugs and delivered them to six institutions. The hospitals submitted a list of drugs needed and material was sent where it was needed the most. Mrs. Russell Snead served as chairman of this project, which was done in observance of Doctor's Day.

The Woman's Auxiliary to the Southern Medical Association at its recent meeting in Atlanta awarded the Richmond Auxiliary first place for the most original observance of Doctor's Day.

The Auxiliary plans to repeat the collection next March.

Petersburg.

The following officers have been installed by the Petersburg Medical Auxiliary for the coming year: President, Mrs. Clyde W. Vick, Jr.; president-elect, Mrs. Joseph McCormick; vice-president, Mrs. Kirby T. Hart, Jr.; recording secretary, Mrs. Mark E. Holt, Jr.; corresponding secretary, Mrs. Herbert Levitt; treasurer, Mrs. Philip Jacobson; historian, Mrs. Norman Sollod; parliamentarian, Mrs. Carney Pearce, Jr.; director, Mrs. William S. Grizzard; and publicity chairman, Mrs. Joseph P. Whittle.

Mrs. Grizzard, Mrs. Vick and Mrs. Holt attended the Annual Public Relations Conference of The Medical Society of Virginia in Richmond, November 24th.

Lynchburg.

Officers elected at the November 30th meeting of this Auxiliary are: President, Mrs. Macey H. Rosenthal; vice-president, Mrs. Frank N. Buck, Jr.; secretary, Mrs. Lloyd C. Agnew; and treasurer, Mrs. Robert L. Brickhouse.

Present officers, Mrs. Holcombe Hurt, Mrs. John Hundley, Mrs. Charles Patterson, and Mrs. William Pugh, entertained the members at the home of Mrs. Hundley with a coffee party. Forty members were present.

During the year, this Auxiliary has established a Nurses' Scholarship Fund to assist a needy and worthy first year nurse at Lynchburg General Hospital in obtaining books and other necessities. So far, two nurses have been given this scholarship.

MARTHA LEE HURT
(MRS. HOLCOMBE H. HURT)

Northern Neck.

Mrs. Maynard Emlaw, Richmond, president-elect of the State Auxiliary, was guest speaker at the meeting of this Auxiliary held at Tides Inn on November 5th.

Doctors' Day was observed by giving each doctor a red carnation and the presentation was made by Mrs. Lee S. Liggan, president.

This Auxiliary has nurse recruitment as its main

project for the year and each member is urged to do all she can to interest young girls in becoming nurses. The chairman, Mrs. R. T. Arnest, reported that thirteen girls have shown interest in nursing.

Seven of the nineteen members were present at the State meeting in Roanoke, and Mrs. Liggan took part on the panel discussion at the State Public Relations meeting in Richmond.

All officers were re-elected for a second term as follows: President, Mrs. Lee S. Liggan; president-elect, Mrs. M. B. Lamberth, Jr.; vice-president, Mrs. E. T. Ames; secretary, Mrs. A. B. Gravatt, Jr.; treasurer, Mrs. Paul Pearson; corresponding secretary, Mrs. R. E. Booker; historian, Mrs. C. Y. Griffith; and parliamentarian, Mrs. M. H. Harris.

Newport News-Warwick.

A meeting of this Auxiliary was held on November 18th at the home of Mrs. John F. Gayle. The president, Mrs. Barnes Gillespie, presided.

Mrs. William M. Goldsmith reported $347.00 was made on the Christmas bazaar.

Mrs. Thomas N. Hunnicutt, Jr., spoke on Nurse Recruitment and suggested that prospective nurses be contacted through the local high schools, and clubs be organized to familiarize the students with some of the duties of the nursing profession.

The next regular meeting of the Auxiliary will not be held until January because of the dinner dance given by the Newport News-Warwick Medical Society for their wives on December 12th.

BESSIE G. AMORY, *Publication Chairman*
(MRS. GUY C. AMORY)

Arlington.

A luncheon meeting was held on November 10th at the Washington Golf and County Club. Dr. John T. Hazel gave a short, but informative talk, on the A.A.P.S. Essay Contest, to be held in the High Schools throughout the State of Virginia and sponsored by the County Medical Societies, regarding Government Controlled Medicine.

Guest speaker for this meeting was Mrs. Mary Baines of Mary Baines Gifts who favored us with a most general display of lovely Christmas gifts and decorations. She also gave us numerous new ideas for the coming holidays.

This chapter also sponsored the T.B. Handicraft sale on December 4-7. All articles were handmade by the shut-ins and handicapped in the various sanitariums in that area. Two of the leading banks in Arlington allotted space for booths for this sale and these were staffed by auxiliary members.

EARLE MITCHELL
(MRS. ROBERT H. MITCHELL)

Norfolk.

Mrs. R. M. Reynolds, member of the Norfolk County Auxiliary and State Chairman of Public Relations, planned the panel discussion for the Public Relations meeting of The Medical Society of Virginia held in Richmond, November 24th. Representatives from this auxiliary also participated in the panel discussion which was moderated by Mrs. Leo J. Schaesser, President of the Auxiliary to the American Medical Association. Mrs. J. R. St. George, president, discussed the projects for the year, one of which is the organizing and sponsoring of Future Nurses Clubs. The Norfolk Auxiliary has had two Future Nurses Clubs in successful operation for the past two years—one at the Granby High School which uses the facilities of DePaul Hospital and one at Maury High School which is associated with the Norfolk General Hospital. The first year six members entered schools of nursing. A third club is to be organized at the Norfolk Catholic High School. The members of the Future Nurses Clubs were guests at a tea on December 15th at Norfolk General Hospital.

Mrs. James Price was general chairman for a luncheon and fashion show given for the visiting wives of the Seaboard Medical Association held in Norfolk on November 15th.

At the November meeting of the Auxiliary, Mrs. James L. Thomson spoke on "The Hurry and Worry Diseases."

Mrs. Maynard R. Emlaw,

Richmond, who is president-elect of the Woman's Auxiliary to The Medical Society of Virginia, was elected third vice-president of the Southern Medical Association Auxiliary at its recent meeting in Atlanta.

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EDITORIAL

Marvin Pierce Rucker, M.D., LL.D.

DR. Marvin Pierce Rucker was born January 6, 1881 in Fairfax County, Virginia. Graduated from Randolph Macon College at the age of eighteen he began the study of medicine at the Medical College of Virginia but, after one year and a summer course at Harvard, transferred to Johns-Hopkins Medical School where he received the degree of M. D. in 1903. While at Hopkins he came under the direct supervision of that school's early great teachers, Osler, Welch, Halstead, and Kelly, an experience that exerted a lasting influence upon his subsequent career. After a brief sojourn at the University of Leipzig in Germany he returned to what was then Manchester and began general practice in partnership with his father, Dr. Edwin T. Rucker.

From 1905 to 1912, Dr. Rucker served as a member of the Manchester Board of Health and, during that period, he discovered an epidemic of amebic dysentery, a disease hitherto unknown in that area. With a large and exacting general practice his interest in obstetrics and gynecology grew and, after 1915, his work was limited to that field. From 1903 to 1930 he taught in the Medical College of Virginia in various capacities from demonstrator in histology and embryology to associate professor of obstetrics. For thirty years he headed the department of obstetrics of Johnston-Willis Hospital and, in 1940, was lecturer on the history of obstetrics at Duke University. Under the auspices of the Richmond I.V.N.A. he organized the first prenatal clinic for indigent mothers in Richmond and one of the first in the south.

Always an active participant in medical organizations, Dr. Rucker became a conspicuous figure in many societies. He served as president of the Richmond Academy of Medicine in 1937; president of the Medical Society of Virginia, 1948; president of the Richmond Obstetrical and Gynecological Society, 1947; president American Association of Obstetricians, Gynecologists, and Abdominal Surgeons, 1934; president South Atlantic Association of Obstetricians and Gynecologists, 1940; vice president American Gynecological Society, 1947 and as honorary vice president of the Medical Library Association. He was also chairman of the Section on Obstetrics and Gynecology of the American Medical Association in 1937 and chairman of the corresponding sections of Southern Medical Association in 1927. From its beginning he was a diplomate of the American Board of Obstetrics and Gynecology.

Beyond the immediate demands of his practice, Dr. Rucker had many interests. He was a regular contributor to medical literature both in the field of his own specialty and in medical history. For ten years he edited the VIRGINIA MEDICAL MONTHLY and one of his last efforts was the preparation of an editorial for that journal. His Floral Eponyms constituted an unique contribution to medical literature. For many years he served as trustee of Randolph Macon College and, from that institution, he was awarded the degree of LL.D. in 1936. He was also chairman of the Board of Stewards of Centenary Methodist Church, a director of the Central Y.M.C.A., and a director of the Johnston-Willis Hospital. He became a member of the Richmond Board of Health in 1946 and was chairman of that body from 1950 until he resigned shortly before his death.

While the foregoing chronicle denotes a life of vigor and usefulness far beyond the ordinary, it fails to portray those qualities of personality that characterize the man. As a doctor, Pierce Rucker was more than a highly trained and efficient specialist. To his patients he was always the wise physician, counselor, and friend. To his colleagues

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he was the scholar whose interests were unbounded and whose store of information was truly astonishing. To his fellow citizens he was one who was always ready to contribute his time and talents to the common welfare and who could be counted upon to discharge faithfully any task he undertook. Modest and retiring in manner, he did not seek publicity and sometimes gave the impression of shyness.

In 1906 Dr. Rucker married Miss Josephine McRae, a descendent of an old Manchester family, who survives him with a daughter, Mrs. Lewis F. Powell, Jr., and two sons, Drs. Edwin and Douglas Rucker, both of whom were associated with their father in practice. Their lovely home, with its spacious grounds overlooking and within sound of the falls of the James, offered an ideal retreat for whatever leisure hours the doctor's busy life yielded. It was within its walls, close to his magnificent and meticulously indexed library and with a view from his window of his well loved flowers and trees, that Dr. Rucker spent most of the last two years of his life.

Fully aware of the presence and the relentless progress of a disease for which there is no known cure, he faced his future with a degree of courage and serenity of spirit that will provide a lasting inspiration to all who came in contact with him. He even made a thorough study of the literature relating to the disease from which he suffered and wrote a masterful summary that was published as an editorial in the VIRGINIA MEDICAL MONTHLY. His constant thought was of contributing all that his waning strength would permit.

Dr. Rucker's death removed from the medical profession a member of rare talent and achievement and, from the community, one of its most loyal and productive citizens. His loss will be sorely felt.

HENRY W. DECKER, M.D.
EMILY GARDNER, M.D.
FRANK S. JOHNS, M.D.
J. MORRISON HUTCHESON, M.D., *Chairman*

Among patients admitted to general hospitals, the prevalence of definite and suspected tuberculosis and of probably active tuberculosis is twice as high as among individuals X-rayed in mass surveys. Thus 14 (1.4 per cent) of every 1,000 patients show on admission X-ray the presence of definite or suspected tuberculosis as against seven for every 1,000 in mass surveys. Two of every 1,000 X-rayed on admission to general hospitals show probably active tuberculosis as against one for mass surveys. N.Y.S. Dept. of Health, Div. of TB Control, 1952 Annual Report.

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SOCIETIES

Wise County Medical Society.

Twenty-seven were present for the dinner meeting of this Society at Hotel Norton, Norton, on the evening of November 11, 1953. Dr. William R. Culbertson, Jr., of the Faculty of the University of Cincinnati spoke on "Antibiotics in Surgical Infection", the lecture being illustrated by pictures in color. He and his associates have done considerable research in antibiotics and have made substantial advances in our knowledge of them.

Dr. W. B. Barton gave an interesting report on the Roanoke State meeting.

The Community Blood Bank in Norton was discussed in detail by Blaine Hale, the Manager, and R. P. Jenny, the Technician in Charge. A committee of three doctors, Dr. J. T. Phillips, Dr. L. N. Kirch, and Dr. C. P. E. Burgwyn, was appointed to work with the Blood Bank. All doctors who prescribe blood from the Bank will see that the family or friends will furnish three pints of blood for each two pints used, at the time the blood is prescribed.

T. J. TUDOR, M.D.
Secretary

Richmond Academy of Medicine.

At the meeting on December 8, Dr. Charles L. Outland presiding, reports for the year were presented by various committees, officers elected, and the Christmas party was held as the closing event. Dr. Benjamin W. Rawles, Jr., named president-elect at the 1952 meeting, will become president at the first meeting in January 1954. Those elected to serve with him are Dr. R. D. Butterworth as president-elect, and Dr. W. Linwood Ball and Dr. H. St. George Tucker, Jr., as vice-presidents. Dr. John P. Lynch and Dr. William H. Higgins, Jr., were elected as new members of the Board.

The Northern Neck Medical Association

Held its 1953 Fall meeting at the Tides Inn, Irvington, on November 5th. Dr. Spotswood Stoddard of White Stone and Dr. Roper Travis, Jr. of Montross were elected to membership. Dr. Harold Sisson of Warsaw was installed as president. Dr. N. R. Tingle of Nuttsville was named president-elect and Dr. M. J. Dailey of Reedville was elected secretary-treasurer. At this time, delegates and alternates were also elected to represent the society at the Washington meeting of the State Society.

Roanoke Academy of Medicine.

At the November meeting, Dr. C. D. Nofsinger presiding, much detail business was discussed, following which papers were read by Dr. Charles A. Young, Jr., on Exophthalmus, and by Dr. Alfred L. Wolfe on Idiopathic Hypertrophy of the Heart. Both were discussed.

Dr. Hugh Trout called attention to the sectional meeting of the American College of Surgeons which is to be held in Charlotte, North Carolina, on February 1, 2 and 3.

The Program Chairman announced that the December meeting would be as a dinner at Hotel Roanoke, the guest speaker being Dr. W. A. Sodeman, Professor and Chairman of the Department of Internal Medicine at the University of Missouri School of Medicine, Columbia, Missouri. His subject would be "Amebiasis".

CHARLES B. BRAY, JR., M.D.
Secretary

Danville-Pittsylvania Academy of Medicine.

At the meeting of the Academy on November 13, Dr. Vincent W. Archer, President of The Medical Society of Virginia, gave a most interesting and informative talk on the role of the physician in organized medicine today. Mr. Robert I. Howard, Secretary of the State Society, gave a more detailed account of the budget of the Society.

At this meeting the following officers were elected for the year 1954: President, Dr. John W. Hooker, Danville; vice-presidents, Dr. James D. Beaton of Gretna and Dr. M. H. McClintic of Danville; and secretary-treasurer, Dr. Jefferson D. Beale, Jr., of Danville.

WALTER C. FITZGERALD, M.D.
Secretary-Treasurer

The Fourth District Medical Society

Held its regular meeting in the Conference Room of the Petersburg General Hospital, December 8, at 3:00 p.m., Dr. Edith Miller of Petersburg, presiding. Papers were presented Dr. Frank M. Blanton of Richmond on Diagnosis and Treatment of Anemias in Adult Life and by Dr. G. Watson James, III, also of Richmond, on Common Anemias in Childhood.

At the business session, officers were elected for 1954 as follows: President, Dr. Tyree Finch, Farm-

ville; vice-presidents, Dr. W. B. Bishop, Lawrenceville, and Dr. C. L. Saylor, Hopewell; secretary-treasurer, Dr. J. G. Graziani, Farmville; chairman of Steering Committee, Dr. Joseph Whittle, Colonial Heights. Following the meeting, the members and guests were entertained at a cocktail party by Van Pelt and Brown of Richmond, followed by dinner at Hotel Petersburg, as guests of the Petersburg Medical Faculty.

The Montgomery County Medical Society

Held its fall dinner meeting at the William Preston Hotel at Blacksburg, on October 15. Dr. R. H. Grubbs of Christiansburg, President of the Society, presided. Thirty members and guests attended.

The medical staff of Virginia Polytechnic Institute took the members on a tour of the new infirmary. Following the business meeting, Dr. C. C. Smith, Superintendent of Catawba Sanatorium, addressed the Society, discussing the tuberculosis problem.

The Fairfax County Medical Society

Met at the new home of Dr. T. B. McCord on Blake Lane, Fairfax, on November 10th. An unusually large group assembled to hear Dr. Alexander talk about his recent experiences in plastic surgery in Korea.

The plans for the annual dinner will be sent individually to the members before the next meeting. The meeting was adjourned and refreshments served.

On December 8th, the Society met at the home of Dr. Claude Cooper in Annandale at 8:30 p.m. Dr. Joseph Beinstein of Arlington was the speaker at this meeting.

Reported by
ALICE H. KIESSLING, M.D.

Lynchburg Academy of Medicine.

The regular meeting of the Academy was held on November 9th at the Lynchburg General Hospital. At this meeting, Dr. William Parson of the University of Virginia gave a review of current research problems.

FRANK N. BUCK, M.D.
Secretary

The Virginia Peninsula Academy of Medicine

Met on November 18 at the James River Country Club. The social hour began at 6 p.m., with dinner at 7. At 8 p.m., the guest speaker, Dr. George G. Finney, assistant professor of Surgery at Johns Hopkins Medical School spoke on "Carcinoma of the Gall Bladder: Another Valid Reason for Cholecystectomy in Patients with Gall Stones". He has reviewed all cases of carcinoma of the gall bladder at Johns Hopkins and Union Memorial Hospitals for the past twenty years.

On December 16, after the usual social hour and dinner, the Society had the pleasure of hearing Dr. Wendell Muncie, Associate Professor of Psychiatry at Johns Hopkins Hospital, Baltimore. His subject was "Observation on the Actual Practice of Medical-Psychiatric Collaboration".

Dr. Chester D. Bradley and Dr. W. T. Watkins, Jr., both of Newport News, are president and secretary respectively of this Society.

Virginia Pediatric Society.

The annual scientific meeting of this society will be at The Homestead, Hot Springs, Virginia, February 26 and 27. Dr. T. Stanley Meade of Richmond is this year's president.

Seaboard Medical Association of Virginia and North Carolina.

The fifty-eighth annual meeting of this Association was held in Norfolk November 15, 16 and 17, under the presidency of Dr. Southgate Leigh of that city. It was considered one of the most successful meetings in severael years, with seven guest speakers, all outstanding in their respective fields. The attendance was approximately two hundred. The guest speakers included Dr. J. Rudolph Jaeger and Dr. Thomas E. Machella of Philadelphia, Dr. Harvey Nelson of Minneapolis, Dr. Edward S. Orgain of Durham, N. C., Dr. Lemuel Bowden of New York City, Dr. Murray Copeland of Washington, and Dr. Houston Everett of Baltimore. Several entertainments added to the pleasure of those attending.

At the business session, the following officers were elected for the coming year: President, Dr. Edwin A. Rasberry, Jr., Wilson, N. C.; vice-presidents, Dr. George Carroll, Suffolk; Dr. A. R. Peter, Washington, N. C.; Dr. James Guy Price, Norfolk; and Dr. O. E. Bell, Rocky Mount, N. C.; secretary-treasurer, Dr. James M. Habel, Jr., (re-elected), Suffolk. The next meeting will be at Hotel Cherry, Wilson, N. C., November 14, 15 and 16, 1954.

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NEWS

Virginia Physicians Guests of Eli Lilly and Company

Several physicians from the state of Virginia, together with their wives, visited Eli Lilly and Company November 18-20 and are pictured herewith. While guests of the Company at Hotel Lincoln, they inspected the Lilly Research Laboratories and toured pharmaceutical, biological, and antibiotic production facilities. On the social side, the guests were given receptions, luncheons, dinners and sight-seeing trips.

Left to right, first row: Dr. and Mrs. Fred Renick, of Martinsville; Dr. and and Mrs. William J. West, of State Farm; and Mrs. Edward Ames and Dr. Ames, of Montross.

Second row: O. M. Stevenson, Jr., Lilly representative in Richmond, who accompanied the group to Indianapolis; Dr. and Mrs. E. C. Bryce, of Richmond; Dr. and Mrs. Mark Williams, of Richmond; and Dr. William Sloan, of Petersburg.

The combined years of medical practice of Drs. Bryce and West total more than one hundred years.

Clinical Conference in Suffolk.

The second annual Clinical Conference at the Louise Obici Memorial Hospital will be held in Suffolk on February the 10th. It will be an all-day affair, lasting from 10:15 a.m. until in the evening. Following a cocktail party and dinner, Dr. Thomas C. Fleming of the Department of Clinical Research of Hoffman-LaRoche, Inc., Nutley, New Jersey, will speak on "Drug Therapy in Hypertension". The program will be of a general nature and will include Dr. Charles G. Congdon of Bethesda, Maryland; Dr. John P. Collins of Durham, N. C.; Dr. R. Cannon Eley of Cambridge, Mass.; Col. Joseph L. Bernier, Washington, D. C.; Dr. Harry F. Dowling of Chicago; and Dr. Harry Walker of Richmond.

A Conference on Asthma

Is to be held in the Medical School Auditorium of the University of Virginia on Friday, January 22. In addition to members of the faculty, the guest speakers will be Dr. Wyndham B. Blanton of Richmond, Clinical Professor of Medicine and Chief of the Allergy Service at the Medical College of Virginia and vice-president of the American Academy of Allergy, and Dr. Susan Dees, Associate Professor of Pediatrics and Allergy, Chief of the Pediatric Allergy Service of Duke University, Durham, and a former vice-president of the American College of

Allergists. Registration should be made through the Office of the Dean, School of Medicine, University of Virginia, Charlottesville.

Keeping Up with the Times.

It is interesting to note that when Dr. A. M. Wallace of Gate City was awarded his certificate by The Medical Society of Virginia at the Roanoke meeting for fifty years of practice of medicine, he flew his private plane to Roanoke and flew back the next day in time to resume his daily routine of service to his patients.

Mr. Larrick Honored by MCV.

Students, faculty members and alumni of the Medical College of Virginia, Richmond, paid tribute to Mr. Jonah Larrick on November 20, in recognition of his thirty years of service as sceretary of the College branch of the Central YMCA. During this time, Mr. Larrick has had a hand in virtually every program at the College involving recreation, athletics and social functions to make off-hours more pleasant for students and staff members. Special ceremonies were held in the Baruch Auditorium to honor him and present him with a gold key and other gifts in appreciation of his services to one and all.

The Virginia Trudeau Society

Was organized in Richmond on December 12 to provide doctors with current information on the detection and control of pulmonary and other thoracic diseases, with especial emphasis on tuberculosis. Approximately fifty physicians attended the meeting and an interesting program was enjoyed with a panel discussion at a dinner meeting. Dr. E. S. Ray of Richmond was elected president, Dr. E. C. Drash of Charlottesville vice-president, and Dr. W. E. Apperson of Richmond, secretary-treasurer.

De Paul Hospital Staff,

Norfolk, had a most interesting program on November 17, when Dr. Thomas H. Hunter, dean of the University of Virginia Medical School, and Dr. John B. Truslow, dean of the Medical College of Virginia, by invitation addressed the large number of doctors attending. They explained the value of internship in good hospitals giving the best in experience and guidance.

Captain E. Randolph Trice.

On duty at Osaka General Hospital, addressed the Thirty-eighth Parallel Medical Society on November 13, on a dermatological subject. Captain Trice is a son of Dr. and Mrs. Ernest T. Trice of Richmond and a graduate of the Medical College of Virginia in the class of '47.

Dr. Lewis H. Bosher, Jr.,

Assistant Professor of Surgery at the Medical College of Virginia, Richmond, delivered the annual Frank N. Hack lecture at the scientific meeting of the medical staff of Winchester (Va.) Memorial Hospital on November 18. Dr. William P. McGuire, chairman of the scientific program committee of the medical staff, introduced the speaker. Following the meeting, there was an informal gathering at the home of Dr. and Mrs. Hugh Clark for the staff and guests.

Parke, Davis & Company

Announces the completion of a new 15,000-square-foot depot in the northeast section of Philadelphia, which was opened December 14. The ground provides adequate off-street parking. This comes under the supervision of the Baltimore branch office.

Dr. Emily Gardner,

Richmond, has been appointed chairman of the Coordinating committee on crippled children's services of the Virginia Council on Health and Medical Care. She succeeds Dr. Louise F. Galvin, director of crippled children's services of the State Department of Health, who has headed the committee since its formation two years ago. Dr. Galvin will continue to serve on the committee.

The American College of Chest Physicians

Has published a report of the Joint Committee on Chest X-Ray in which the statement is made that each physician should be encouraged to have a chest x-ray of all his patients; that every patient admitted to a hospital, private or public, should have a routine chest x-ray; and that the follow-up for all suspected lesions seen in chest x-ray surveys should be organized very carefully to assure that the patient comes under medical supervision.

A.M.A. Hawaiian Holiday Tour.

A party of physicians and their wives are expected to take advantage of the American Medical Association's 13-day Hawaiian Holiday Tour which will follow the annual convention in San Francisco next June 21-25. The party will leave San Francisco aboard Pan American Airways Strato Clippers at

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night of Friday, June 25 and arrive in Honolulu early next morning. After an 8-day stay on the islands, the return trip will be made by steamer which will dock in Los Angeles on July 8.

All of the reservations are being handled by W. M. Maloney, general agent, Room 711, 105 West Adams Street, Chicago.

Dr. R. Finley Gayle, Jr.,

Professor and chairman of the Department of Psychiatry and Neurology, at the Medical College of Virginia, Richmond, has been nominated as president-elect of the American Psychiatric Association and the nomination will be acted upon at the APA's annual meeting next May.

Dr. Charles W. Dorsey,

Recently of Roanoke, has moved to Galax where he will be engaged in practice.

Doctors in Alcoholic Anonymous.

The fifth annual International Group of Doctors in Alcoholic Anonymous will meet at the Mayflower Hotel, Akron, Ohio, May 14, 15 and 16. For information and reservations address: Doctors, Mayflower Hotel, Akron, Ohio.

This group of doctors in AA was formed five years ago with a few men from Western New York State. At last year's meeting there were present men from as far south as Florida and as far west as Colorado.

Position for Officer in Psychiatry and Neurology.

The U. S. Civil Service Commission has announced a new Medical Officer examination for filling the positions of rotating intern, $2,800 a year, and resident in training in psychiatry and in neurology, $3,400 to $4,200 a year, in St. Elizabeths Hospital in Washington, D. C. Appointments are to begin on July 1, 1954.

Appropriate education is required, plus, for the resident positions, successful completion of a full year's internship. No written test is required. Applicants must not have passed their thirty-fifth birthday (waived for persons entitled to veteran preference). Further information is available at many post offices throughout the country and at the U. S. Civil Service Commission, Washington 25, D. C. Applications will be accepted by the Executive Secretary, Board of U. S. Civil Service Examiners, St. Elizabeths Hospital, Washington 20, D. C., until further notice.

For Sale—

1 Baker machine. Walter S. Edmands. No. 3421. Volts 115.

1 Ultra violet machine. Burdick. 49098.

1 Microscope with glass cover and wooden case. Bausch-Lomb.

Prices reasonable. Apply to "Machines" care the Virginia Medical Monthly, P.O. Box 5085, Richmond, Va. (*Adv.*)

Wanted—

Physician for the Staff of the DeJarnette State Sanatorium, Staunton, Virginia. This is a psychiatric hospital of approximately 180-bed capacity. Starting salary $8,400.00 to $8,784.00. Apply to the Superintendent. (*Adv.*)

Wanted—

Sr. Staff Physician, 220 bed T. B. Hospital using Modern Therapy including Chest Surgery. Annual stipend $6,552.00 to $7,800.00 with nominal deductions for apartment and maintenance. Based on qualifications, appointee may be started in second or third step. Apply Medical Superintendent, Pine Camp Hospital, Richmond, Virginia. (*Adv.*)

Needed—

A physician. House and office available. Good location. High School. Wood Products Manufacturing Company factory. See Miss Clara Smith, Ladysmith, Virginia. (*Adv.*)

OBITUARIES

Dr. William Tate Graham,

Richmond, one of the most widely known orthopedic surgeons in the South, died December 13 at a local hospital, after a long illness. He was a co-founder of the Crippled Children's Hospital in this city and was its surgeon-in-chief to the time of his death. He had been a member of the State Board of Health for approximately forty years and was also for many years its president. Dr. Graham was eighty years of age and a native of Wythe County where he was also buried. After graduating from the University of Virginia in 1896, he practiced for

a short time in Wytheville before studying orthopedic surgery at the Children's Hospital in Boston and in hospitals abroad. He opened his offices in Richmond in 1913 and, during the infantile paralysis epidemic in 1919, Dr. Graham with Miss Nannie Minor, a Richmond nurse, set up a clinic which was the nucleus of the Crippled Children's Hospital. Dr. Graham was professor of Orthopedic Surgery at the Medical College of Virginia until his retirement in 1948. Two sisters survive him.

Dr. Clifton T. Titus,

Prominent physician of Bedford, died in a local hospital, November 21, after an illness of about a month. He was fifty-eight years of age and a graduate of the Medical College of Virginia in 1931. He practiced in Patrick County before moving to Bedford in 1942, where he had since taken a prominent part in the activities of that community. He was president of the Bedford County Medical Society, a member and a past vice-president and treasurer of the Virginia Academy of General Practice, and an active and interested member of The Medical Society of Virginia since 1935. His wife and three children survive him.

Dr. George Colbert Tyler,

Newport News, died November 21 en route home from a medical meeting at White Sulphur Springs, W. Va., death being due to a heart attack. He was fifty-six years of age and studied medicine at the University of Tennessee, Memphis, from which he graduated in 1924. He served in the Army during World War I and, shortly after graduating, he located in Heathsville. While there he joined The Medical Society of Virginia in 1925. He later moved to Newport News where he was a former health officer of that city and was a member of the old State Game Commission. He was a member of the medical staff at the Newport News Shipyard Clinic and a staff member at Riverside Hospital that city. Surviving are his wife, two sons, his mother and two brothers.

Dr. Delbert Thornton Saffer,

Who had practiced in Middleburg for the past twenty years, died December 6 from a heart attack. His wife and four children, three of whom were students in Virginia colleges, survive him. He was forty-eight years of age and a graduate of the Medical College of Virginia in 1930. He had been a member of The Medical Society of Virginia since 1934, had been a president of the Loudoun County Medical Society, and was a clinician at the Fauquier-Loudoun Health Center.

Dr. Frederick Eugene Steere,

Well known physician of Claremont, died in a Richmond hospital on November 29, aged 83 years. He was a native of Petersburg and graduated from the Philadelphia College of Pharmacy in 1893, later studying medicine and graduating from the Medical College of Virginia in 1909. He continued in active practice until about two weeks before his death. Dr. Steere joined The Medical Society of Virginia in the year of his graduation in medicine. Three sons survive him.

Dr. Francis Musgrave Howell,

Retired physician of Hopewell, was the victim of drowning while he was on his motor boat near Irvington, November 28, and apparently slipped and fell in the creek. He was seventy-seven years of age and had come to this country from England in 1910. He had practiced in Lynchburg and Hopewell in both of which places he had taken an active interest in the local societies. He had been a member of The Medical Society of Virginia since 1921. No near relatives survive him.

Dr. Robert C. Kirkwood

Of Hampton, died in the Kecoughtan VA Hospital, May 24, having been in bad health for sometime. He was sixty-seven years of age and a graduate of Jefferson Medical College of Philadelphia in 1908. He had not been in practice since his return to Virginia several years ago. His wife and several children by a former marriage survive him.

Dr. Robert S. Preston.

On October 28, 1953, Dr. Robert Sheffey Preston died suddenly following a heart attack during the early morning hours.

Dr. Preston was born in Abingdon, Virginia, on July 31, 1885, and was a member of an old Southwest Virginia family. Several of his close relatives have attained prominence in the medical profession. For his college and professional education he attended Hampden-Sydney College, receiving his A.B. degree at that institution and going then to Princeton University for a year of postgraduate work. He then enrolled in the School of Medicine of Johns-Hopkins University where he received his medical degree. Following his graduation in medicine, he was

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awarded an internship in Bellevue Hospital, New York, and on its conclusion had post-graduate medical work in Germany. Shortly afterwards he came to Richmond and engaged in the practice of Internal Medicine. His practice was interrupted at the beginning of World War I as he volunteered promptly for service and received his commission in the Army Medical Corps. He was assigned to Evacuation Hospital, Unit #10, and remained in France with this unit until the end of the war.

After the war he continued his medical practice until the time of his death. He served faithfully for many years as a member of the faculty of the Medical College of Virginia in the Department of Internal Medicine and was a long-time member of the staff of the Johnston-Willis Hospital. He was for many years a member of the Board of Deacons of the Second Presbyterian Church.

Dr. Preston always had a high sense of integrity and faithfulness to duty and in his practice he was uniformly painstaking and conscientious in the study and care of his patients. He was a man and a gentleman of the highest type.

BE IT THEREFORE RESOLVED THAT in the death of Dr. Preston the medical profession has lost a skilled physician and one who was a credit to his calling on account of his character, as well as his professional qualities.

BE IT FURTHER RESOLVED THAT a copy of this resolution be recorded in the minutes of the Richmond Academy of Medicine and that a copy be sent to the members of Dr. Preston's family.

Committee DONALD S. DANIEL
WELLFORD C. REED
DANIEL D. TALLEY, JR., *Chairman*

Dr. George M. Maxwell,

77 years of age, born in Mecklenburg County, North Carolina, died September 24, 1953, after a lingering illness following a fractured spine. He was graduated at Davidson College in North Carolina and in June 1906 was graduated in medicine at Jefferson Medical College. After his graduation there he taught for several years at Davidson College and while here also engaged in general practice. He located in Roanoke in 1907 specializing in Otolaryngology and Ophthalmology.

Dr. Maxwell served in the Spanish-American War and World War I. He was past president of the Roanoke Academy of Medicine and a charter member of the Roanoke Kiwanis Club. He was honored by membership in many social, fraternal, and medical organizations. He was a member of the Raleigh Court Presbyterian Church. He was especially gifted and fond of poetry. He is survived by his wife, nine children and twenty-five grandchildren.

Dr. Maxwell was held in high esteem by all who knew him. The Roanoke Academy of Medicine and the community have suffered a great loss in the passing of this fine physician, Christian gentleman and distinguished member.

We ask that our sympathy be extended to the surviving members of his family and that a copy of these resolutions be sent to them, spread in the minutes of this society, and a copy forwarded to the VIRGINIA MEDICAL MONTHLY.

GEORGE B. LAWSON, M.D.
W. R. WHITMAN, M.D.
GEORGE S. BOURNE, M.D.

Resolutions on Dr. Robert Dennis Caldwell.

WHEREAS: Almighty God in His Infinite Wisdom didst remove from our midst our loyal friend and coworker in the Art of Healing, Robert Dennis Caldwell, M.D. on August 18, 1953, the Lynchburg Academy of Medicine requests that the following resolutions be spread upon the minutes of its meetings and that a copy be sent to his family and to the Virginia Medical Monthly.

BE IT THEREFORE RESOLVED: That the Lynchburg Academy of Medicine, his co-workers, the City of Lynchburg, the Medical Society of Virginia and his close personal friends have lost one, whose character, as evidenced by the high ideals with which he practiced his profession was outstanding in every respect. He was one who may be replaced, but whose place will never be taken in the hearts of his friends and those who knew him best.

BE IT ALSO KNOWN: That he was the first specialist in his field, Pathology and Bacteriology, to locate and practice that specialty in Lynchburg. He came to Lynchburg in 1921.

BE IT FURTHER KNOWN: That during his whole professional career, he rendered that service to the physicians, patients and hospitals of this community with an idealism and faithfulness to the truth and to the unbounding welfare of all who came under his care, rich and poor alike.

BE IT FURTHER RESOLVED: That we, the members of Lynchburg Academy, miss him sorely and extend to his wife, and his brothers and sisters our sincere and deepest sympathy, but that we feel that Divine Providence has supervened and taken unto Itself our beloved friend and co-worker for greater happiness in the Eternal Life to which we all some day hope to be summoned.

It is with sadness in our hearts that your committee hereby presents these resolutions to the Lynchburg Academy of Medicine for its approval.

Respectfully submitted:
JAS. R. GORMAN
W. B. PUGH
J. E. HAYNSWORTH

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